CONTINENT STOMA FOR ILEAL POUCH CATHETERIZATION IN OWN MATERIAL – PRESENTATION OF VARIOUS SURGICAL TECHNIQUE IN PATIENTS WITH BLADDER DYSFUNCTION

LeszekKomasara, Anna Bryks-Laszkowska, Magda Wolf-Tybura, Piotr Czauderna

Department of Surgery and Urology for Children and Adolescents,

Medical University of Gdansk, Poland

BACKGROUND:

Widespread use of various bladder augmentation and ileal neo-bladder surgical techniques require creation of continent urinary diverting stomas for easy self-catheterization.

The aim of this study is to present surgical techniques of creation continent catheterizable stoma (CCS) and to assess of their efficacy.

METHODS:

Between 1997-2012 in our Department CCS was performed in 41 children. Appendix was used in 26 cases, ureter in 6, ileum (Monti's procedure) in 1 and pedicle pouch wall flap (Macedo procedure) in 8 cases.

RESULTS:

Follow-up revealed that 40 stomas function efficiently. Only one case of leakage in CCS created from appendix was observed 1 year after operation, with a low leak point revealed in urodynamic investigation. Stricture of cutaneous orifice was observed in 3 cases and resolved in all after periodic dilatations. The choice of the particular technique for CCS fashioning depends mainly on availability of various organs, i.e. ureter or appendix. This was confirmed by the clinical observation which revealed 40/41 well-functioning CCSs regardless of type of surgical method used.

CONCLUSIONS:

Properly created CCS seems to be an optimal choice that allows maintaining high quality of life in patients with severe native bladder dysfunction or after neo-bladder construction.

Fetal Hydronephrosis as a Predictor of Neonatal Urologic Outcomes

Alireza A. Shamshirsaz, MD, Samadh F. Ravangard, DO, James F. Egan, MD, Ann Marie Prabulos, MD, Amirhoushang A. Shamshirsaz, MD, Fernando A. Ferrer, MD, John H. Makari, MD, Heidi K. Leftwich, DO, Katherine W. Herbst, MS, Rachel A. Billstrom, MD, Allison Sadowski, MS, Padmalatha Gurram, MD, Winston A. Campbell, MD

Objectives: The ability to predict surgically relevant fetal renal hydronephrosis is limited. We sought to determine the most efficacious second- and third-trimester fetal renal pelvis anteroposterior diameter cutoffs to predict the need for postnatal surgery.

Methods: We retrospectively reviewed the medical records of mothers and neonates who had a prenatal sonographic examination in our Perinatal-Pediatric Urology Clinic and received follow-up care. Hydronephrosis was defined as a renal pelvis anteroposterior diameter of 5 mm or greater in the second trimester and 7 mm or greater in the third trimester. Hydronephrosis was subdivided into mild, moderate, and severe.

Results: Of 8453 fetuses, 96 met the criteria and were referred to our clinic. Isolated hydronephrosis was diagnosed in 74 fetuses, of which 53 received postnatal follow-up evaluations. The areas under the receiver operating characteristic curves for predicting postnatal surgery in the second and third trimesters were 0.770 and 0.899, respectively. The second-trimester renal anteroposterior diameter threshold that best predicted postnatal surgery was 9.5 mm (sensitivity, 71.4%; specificity, 81.1%). The third-trimester threshold that best predicted postnatal surgery was 15.0 mm (sensitivity, 85.7%; specificity, .(%۹٤,٦

Conclusions: The fetal renal anteroposterior diameter on second- and third-trimester sonography is predictive of an increased risk for neonatal urologic surgery. Surgical risk is best predicted by a third-trimester renal anteroposterior diameter threshold of 15 mm.

دکتر بهار اشجعی، دکتر جواد احمدی

Urogenital and extra-urogenital anomalies associated with hypospadias in children who were operated in children's medical center from January 2008 to January 2013

Ashjaei B, Ahmadi J

Background:

Hypospadias is a congenital anomaly which can be associated with other urogenital or extra-urogenital anomalies. Some of these anomalies need surgical intervention before or after hypospadias repair.

Materials and methods:

We reviewed the patients who were operated for hypospadias repair in children's medicinal center from January 2008 to January 2013.this is a retrospective study and the urogenital and extra-urogenital anomalies that were written in the files of cases were included in our study.

Results:

We had 352 cases that were operated for hypospadias. we found Undescended testis in 35 cases (9.94%), inguinal hernia in 28 cases (7.95%), bifid scrotum in 14 cases (3.97%). Extra-urogenital anomalies that were associated with hypospadias in our patients were congenital heart diseases in 18 cases (5.11%), anorectal malformation in 10 cases (2.8%), musculoskeletal anomalies in 8 cases (2.27%), cleft palate in 6 cases (1.7%) and cerebral palsy in 3 cases (0.85%).

Conclusion:

Hypospadias is a congenital disease that can be associated with urogenital and extra-urogenital anomalies and we must consider these anomalies in our examination and prepare the cases for surgical repair by considering these anomalies.

Hypospadias in Zanjan, clinical and surgical review

Naomi Diaz D
Assistant Professor of Pediatric Surgery, Zanjan University of Medical Sciences

BACKGROUND: Hypospadias is the most common congenital anomaly of the penis. It occurs as a result of a birth defect resulting in a urethral opening anywhere from the glans penis along the ventral aspect of the shaft of the penis up to the scrotum or the perineum in extreme cases. The condition has a huge impact on the patient's psychological, emotional and sexual well being. This study aimed to evaluate the current trend in the treatment of hypospadias in Zanjan. Iran.

METHODS: This is a retrospective study done in Zanjan University Hospital, department of Pediatrics Surgery, for patients who underwent hypospadias surgical repair in the period March 2009 to March 2012.

RESULTS: There were 31 patients in this study. Regional distribution of the patients showed that 49% of the patients live in Zanjan city, while 51% were from the peripheries; 52% were of low socioeconomic status. Anterior hypospadias was the commonest type (45%), and associated chordee occurred in most of the patients (87%). The most common associated anomalies found were undescended testicles (21%) and inguinal hernia only in 3%. The most common type of repair was MAGPI (meatal advancement and glanuloplasty) with 45% of cases and an overall complication rate of 26%. Chordee was the most prevalent association in 87% of cases.

CONCLUSIONS: Associated chordee and other anomalies are in keeping with other reports. Corrective surgery for hypospadias is associated with high complication rate in our setting. Collaboration between surgical specialties such as plastic surgeons, pediatrics urologist and general surgeons may improve the present complication scenario.

دکتر لیلی مهاجرزاده، دکتر احمد خالق نژاد طبری، دکتر محسن روزرخ،دکتر علیرضا میرشمیرانی، دکتر پرند غفاری

Evaluation of onlay island flap in repair of Hypospadias

Mohajerzadeh L, Khaleghnejad Tabari A, Rouzrokh M, Mirshemirani A, Ghaffari P

Pediatric Surgery Research Center,

Shaheed Beheshti University of Medical Sciences, Tehran, Iran

Aim: To assess the results of using onlay island flap in the repair of hypospadias, with regard to meatal stenosis, urethrocutaneous fistula and esthetic outcome.

Patients and methods: This prospective study from June 2012 to January 2013 at Mofid Children's Hospital, involved 12 patients with mean age 18 months(range 10-24 month); all had a shallow urethral plate<6 mm, 5 had a small glans, 9 with chordee and one had a previous operation but still had accessible preputial skin. 3 were distal shaft, 3 mid shaft and 6 proximal. Surgery was starting with penile degloving and then harvesting the transverse island preputial flap provides a flap about 1 cm longer than the urethral plate. We established Nesbit's dorsal placation procedure For 9 patients with chordee. Two lateral incisions are made along the urethral plate with deep dissection into the glanular wings except in 3 cases with very small glance that we did not perform it. The onlay flap is sutured completely to the urethral plate, except in mentioned 3 cases that leaved 1 cm distal to the tip of the glans, which sutured to the edges of the glanular wings.

Results: There were no cases of meatal stenosis or requirement for urethral dilatation. One patient without glansoplasty had an urethrocutaneous fistula that need surgical repair in future. Regarding esthetic appearance, except 3 patients without glansoplasty the other were satisfactory.

Conclusion: This technique offers acceptable results regarding meatal stenosis, urethrocutaneous fistula and esthetic outcome.

Malformations of epididymis in undescended testis in patients who were operated in children's medical center from October 2010 to October 2013

Ahmadi J, Ashjaei B

Background:

Male infertility is one of challenging problems after in cases who were operated because of undescended testis in childhood period. This problem is more due to epididymal and vassal anomalies rather than surgical complication. Common epididymal anomalies associated with undescended testis are elongated epididymis, epididymal atresia and separation of epididymis from testis.

Materials and methods:

We studied the patients who were operated because of undescended testis in children's medical center from October 2010 to October 2013.this is a retrospective study and the data are written from surgical reports in patients' files.

Results:

We operated 493 patients with undescended testis from October 2010 to October 2013 that were included 624 testis. In our study we found simple epididymal elongation in 224 cases (35.89%), complete disruption between the testis and epididymisin 118 cases (18.9%) and atresia of epididymis in 37 cases (5.9%).

Conclusion:

Epididymal anomalies can be the cause infertility in male adults without any deformity in testis and sperm production. If we write these anomalies in our surgical reports it can be a guide for infertility management of the patients and sperm transportation in the future.

دکتر منصور شیخ، دکتر احمد خالق نژاد طبری

Tube and Tubeless repair of Hypospadias by Tip Procedure

Sheikh M, Khaleghnejad Tabari A

Pediatric Surgery Research Center, Shaheed Beheshti University of Medical Sciences

Purpose:

The treatment of hypospadias has recently changed with different procedures.

This technique has accepted as a good approach in different kinds of hypospadias. This study were aimed the report our experience in Tube and Tubeless repair in Tip Procedure.

Method:

14 patients with distal and sub coronel hypospadias were operated on during 2011 – 2012 by this method. Meddling age 17 Months (7m -36 m)

Result:

A total of 14 children Treated for distal hypospadias with or without chordee.8 patients were with mild chordee and remaining were without chordee.

Patients were divided in the two groups. 6 of these patients operated on tubeless and remaining with tubes the mean follow-up period was 12 month (8m -16m) In comparison these two methods the result was the same (in tube method one patient complicated by fistula and in tubeless method one patient complicated by meatal stenosis and without any fistula.

Conclusion:

1- Although there are many methods to repair distal hypospadias but the Tip method, is the preferred method by many experienced Surgeons.

2- The Complication and morbidity and hospital stay in Tubeless method is less and has better cost effectiveness.

Use of Preputial Island Flap for skin closures in Hypospadias Reconstruction

Mollaeian M, Eskandari F,Sheikh M, Mollaeian A

Department of Pediatric Surgery, Bahrami Children's Hospital,

Tehran University of Medical Sciences

The ventral preputial deficiency found in most hypospadias patients includes its inner "mucosal" surface, which normally provides coverage between the corona and shaft skin. Instead, shaft skin occupies the space from margins of the open glans wings to the urethral plate and meatus. To create the appearance of a normal circumcised penis this shaft skin must be removed and there are various options for covering the ventral surface of the penis.

The preputial island flap is a good material for coverage of the ventral skin defect. This flap may be used for covering of more than half of penile shaft surface. We present the results of this option and its complications in about 100 cases.

Comparative Assessment of Sutureless Circumcision and Conventional Circumcision with Suture in Children

Amanollahi O, [2]Soleimani A

Associate professor of pediatric surgery

Pediatric surgery ward, Mohammad Kermanshahi Hospital

Kermanshah University of Medical Sciences, Kermanshah, Iran

BACKGROUND: Circumcision is one of the most common surgical procedures in Iran and many other countries of the world, its dating back to the fifteen thousand years ago. Several methods have been developed to do it until now, each method has its own advantages and disadvantages and comparison of the various methods is still subject of discussion. In this study we compared conventional method (excision of prepuce with knife and suture hemostasis with absorbable stitches(with new method) cutting. Prepuce and hemostasis by low voltage electrocautery alone without any stitches

METHODS: 80 children who underwent circumcision in Emam-Reza Hospital of Kermanshah between1389-1390 included in this study. Children divided in two groups. 40 children in each group Control group underwent conventional method (cutting prepuce with a scalpel knife and suture and hemostasis with chromic suture).in Study group we used only low voltage electrocautery for cutting prepuce and hemostasis without any stitches and sutures, then results of two methods were compared.

RESULTS: No significant complications occurred in both groups, there was no difference in this regard. Time spending and procedure cost was significantly lower in study group but appearance and cosmetic results was better in control group.

CONCLUSIONS: we recommend cutting of prepuce and hemostasis with low voltage electrocautery and using only 3-4 fine stitches with 5-0 chromic suture for better cosmetic results.

دکتر لیلی مهاجرزاده، دکتر احمد خالق نژاد طبری، دکتر محسن روزرخ، دکتر علیرضا میرشمیرانی، دکتر ناصر صادقیان، دکتر فتح اله روشن ضمیر، دکتر جواد غروبی، دکتر شقایق حساس یگانه، دکتر پرند غفاری

Results of hypospadias repair in Mofid children Hospital

Mohajerzadeh L, Khaleghnejad Tabari A, Rouzrokh M, Mirshemirani A, Sadeghian N, Roshanzamir F, Ghoroubi J, Hassas yeganeh SH, Ghaffari P

Pediatric Surgery Research Center,

Shaheed Beheshti University of Medical Sciences, Tehran, Iran

PURPOSE : Considerable controversy exists regarding the optimal surgical technique for the repair of hypospadias, we collected results of hypospadias repair in last 6 years ago, to evaluate differences in surgical preferences among pediatric surgeons in our center and compare the consequences. We want to compare our results whit other centers for identifying our pitfalls.

Material &Method: From1385 until 1391 we had 572 patients with hypospadias that repaired primary in Mofid Children's Hospital. Referral patients with complication removed from our study. We provided hypospadias sheet and collected all information from files. Then we called and requested them for visit and uroflowmetery in children more than 3 years old.

Results: We had 572 patients with mean age 36 months(3-168month).Classification included:153Glanular(26.7%),87subcoronal(15.2%),254distal penile(42.8%),34midshaft(5.9%)11proximal(1.9%),25penoscrotal(4.4%),4scrotal(O.7%), 2Megaureter(0.3%)and10unknown(1.7%).Most common associated anomaly was inguinal hernia(7.5%).18.2%had penile chordee, and 4.2%had been circumcised in other center. Preoperative hormone therapy established in 11 cases (1.9%).Primary surgical technique **included:** MAGPI in 215(37.6%),TIP307 (53.7%),Smith(3.5%),Matheu(1%),Two stage Inlay(1%),Duckett(0.2%),Pyramid(0.2%).27.8%repaired without urinary catheter and 4patients(0.7%) underwent retrograde cystostomy. Most common complication after surgery was urethrocutaneous fistula (19.1%) and we had 1.7%complete failure.65% of patients with fistula underwent redo repair one time, 19.3%two times, 10.1%three times, 3.7%four times and 0.9% five times.70% of fistula was after TIP repair and 23% of our TIP repairers led to urethrocutaneous fistula.57.9%of patients received Oxybutinin after surgery, and 49% of repairs were done with magnifying loupe.

Conclusion: The only way to improve results is to gain more experience, assess the complications met, and learn from other.

A New Modification of Tubularized Plate Urethroplasty

(The Report of 25 cases)

Mohammadipour A

Golestan University of Medical Sciences-Gorgan, Iran

Tips method (SNODGRASS) for repair of hypospadiasis is one of the effective methods for hyopspadisis repair. Short–term result has been excellent, and this procedure is enjoying extensive popularity. Theoretically one concern is the possibility of meatal stenosis from scarring; direct-vision internal urehrotomy often leads to recurrent stricture. For reducing rate of this complication we have done two modification in our patient: first we have separated full thickness mucosal free graft from prepuce and suture to incised plate with 6/0 vicryle longitudinally then insert two layer stent before doing of urethroplasty, after repair of urethra outer layer of stent was extracted, and inner layer of it stay in place for 6 days Two layer stent has made from 8F silastic foley catheter and 10F or8FNelaton intra-operative. In 25 patients in this study there is no stricture or fistula in 18 months period of follow up. Two layer stent and mucosal full thickness graft reduce rate of stricture and fistula formation and perhaps reduces need for supra-pubic drainage.

Cosmetic results in a simple method for preputal skin defect repair

Ghavami Adel M, Mollaeian M

Ali Asghar Children's Hospital, Tehran University of Medical Sciences, Tehran- Iran

Background: Hypospadias is a common birth defect of the penis. Besides the abnormal position of the urethral opening there is usually a ventral preputial defect with preputial redundancy in dorsal shaft. There are many flap procedures for correcting this defect. Here we explain our experience about a procedure for skin coverage with a better cosmetic result.

Material &Method: It is a prospective study on patients with mid shaft to glandular hypospadias between June 2008 to December 2012 It was performed by one surgeon in two centers and cosmetic results were evaluated by parents and another pediatric surgeon. In this procedure inner prepuce incised curvilinear remaining 5 mm in medial and 8 mm in lateral aspects of the inner prepuce. And for skin repair dorsal flaps were approximated in midline in continuity of median raphe.

Results: There were 63 patients with mean age 25.75 ± 8.46 (7-93 months) with mean 7.06 ± 3.34 (2-15 months) follow up. There were 4 complications. Overall satisfaction for penile skin coverage was 93.7% in parents and 98.4% in surgeons' opinion. Patient age and primary site of meatus have a meaningful correlation with cosmetic results. (p values=0.01 & 0.005 accordingly) While urethroplasty techniques and post operative complications had little effect. (P value=0.195 & 0.135 accordingly)

Conclusion: Re-approximation of dorsal flaps in midline is a simple method and can be used in most cases of uncomplicated primary hypospadias. By this technique we can achieve a more near normal appearance.

Urethral Mobilization and Advancement with Distal Triangular Urethral Plate [DTUP] Flap for Midshaft to Distal Hypospadias Experience with 251 Cases

[1]Mollaeian M, [2]Sheikh M, [3]Tarlan S

[1]Department of Pediatric Surgery, Bahrami Children's Hospital, Tehran University of Medical Sciences,
[2]Khanevadeh Hospital, Tehran, Iran, God's Hospital, Ghazvin University of Medical Sciences, Ghazvin, Iran

Purpose: All urethral reconstruction for hypospadias that involves using of local tissue or flaps or substitution, have inherent incidence of complications including fistula and meatal stenosis and urethral re-stenosis with time and recurrence of chordee. In order to avoid these complications, a urethral mobilization and advancement with distal triangular urethral plate flap technique for repairing distal and selected cases of midshaft hypospadias with or without chordee was developed and used for 10 years. A description of the procedure and the results are presented.

Materials and methods: From 1993 to 2004 251 boys, 2 to 16 years of age, Underwent repair of glanular (62), subglanular (128), midshaft (28), recurrent (33), hypospadias. Chordee was present in 201 patients, the procedure initiated with penile skin degloving and correction of chordee, mobilization of meatus and urethra until the meatus reach to the tip of glans without tension. The glanular urethral plate was bivalved deeply to the corpora cavernosa proximally and a distal based triangular urethral plate flap was created. The glans wings were widely mobilized laterally. The meatus was incised proximally on its dorsal wall for 5-6 mm creating a V-shaped opening and anastomosed to the triangular urethral plate flap. The glanoplasty and meatoplasty was done. Any penile ventral skin defect was covered using preputial skin flaps.

Results: Follow up ranged from 6 months to 10 years. None of patients had urethrocutaneous fistula or meatal stenosis. There were 2 recurrent chordee in cases of midshaft hypospadias with chordee due to inappropriate selection of cases one patient had a hematoma that resolved after emptying under GA.Cosmetic results were excellent.

Conclusions: This procedure is one of the most appropriate and preferable one in all distal and selected cases of midshaft hypospadias with or without chordee due to minimal complication and excellent cosmetic results.

دکتر سعید طرلان

Results of two common techniques in repairing Epispadiasis in Qods Children's Hospital

Tarlan S

Qazvin University of Medical Science

Abstract: Epispadiasis extends from a partial and brief malformation to a complete defect of dorsal part of penis that is accompanied by exstrophy of the bladder. This malformation is classified on the basis of meatus place in Epispadiasis: Glanular, penile and penopubic.

It is usual that in penopubic Epispadiasis, this malformation is accompanied by urinary incontinence. Its prevalence is about 1/120000 in boys and 1/500000 in girls. Accompanied anomalies are mostly related with urinary system. Different technique is innovated to repair it and for each of them benefits and complications is considered.

Method: in this study we compared five Epispadiasis cases that were repaired by Mitchel- Bagli technique with four cases that were repaired by Modified Cantwel –Ransley technique.

Results from these two types of surgery showed that although there is not considerable difference between the two technique in results (such as; fistula, meatus stenosis, increasing bladder volume and duration of surgery), but in Mitchel- Bagli technique in 3 cases of patients it eventuated to Hypospadiasis that needed subsequent surgery and it is clear that in patients with previous malformations of urethra, repairing of Hypospadiasis in these patients is accompanied by further problems.

Results: although these 2 techniques in repairing Epispadiasis are of the same success and acceptability but probability of secondary Hypospadiasis in Mitchel- Bagli technique is more than the other and therefore needs subsequent surgery, so Modified Cantwel –Ransley technique seems to be the first option to repair Epispadiasis.

دکتر مهران هیرادفر، دکتر مرجان جودی، دکتر پریسا سعیدی، دکتر احمد بذر افشان، دکتر رضا شجاعیان، دکتر رضا نظرزاده

A New Modality of Arterial Supply of Free Appendix Graft for Urethral Substitution L Report of Case and Surgical Technique

Hiradfar M, Joudi M, Saeedi P, Bazrafshan A, Shojaeian R, Nazarzadeh R

Sheikh Children's Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Purpose: The best way of urethral reconstruction in cases with multiple pervious failed operations is a matter of debate. Appendix is a one of the candidates for urethral substitution. It may used as a pedicle flap or a free graft. We report the use of inferior epigastric artery as an arterial supply of free graft appendix for urethral substitution for the first time.

Material and Methods: A 3 years old boy was referred to our unit due to failure of multiple reconstruction techniques for proximal urethral injury. He had an iatrogenic urethral injury 18 mo ago. Previous attempts at reconstruction of the urethra failed including end to end anastomosis, urethroplasty with skin graft and also buccal mucosal graft. Imaging study revealed a long, 5 cm defect in proximal urethra. We used appendix for urethral substitution. As it was not possible to bring the appendix to the perineal area on the base of mesenteric vessels, we had to cut the blood supply, and anastomose it to the transposed inferior epigastric artery that was released from the posterior wall of rectus sheet and pulled through the inguinal canal to perineal area. Saphenous vein was used for drainage. Appendix was retained in the scrutom for 3 weeks and urethral reconstruction was done after this period.

Results: One year follow up showed spontaneous voiding through the neo -urethra. Urethrotomy was done 3 times during this period to achieve the best caliber.

Conclusion: Appendix is one of the alternatives for urethral substitution. It may not be possible to bring it to perineal area at the base of mesenteric vessel in every case. In this situation free appendix graft may be used. Inferior epigasteic artery not only has good diameter and flow rate as an arterial blood supply but also prevents inadvertent compromise of the lower limb blood supply.

A comparative study on effect of two types of urine drainage cares (open/closed System) on early complications after hypospadias repair in 6-36 months old children hospitalized at Mofid Children's Hospital in 1390

Fatemian M (BS in nursing) Alaee F (PhD nursing)
Pediatric Surgery Research Center, Shaheed Beheshti University of Medical Sciences

Background: Hypospadias is one of the most common malformations of the penis that affects 1/250 live male births and the correction of Hypospadias is a common surgical procedure. The best time for repair of hypospadias is 6 to 18 months that has the least effect emotional trauma. The main purpose of this study was to compare of two types of urine drainage care (open/close system), on acute complications after Hypospadias repair.

Methodology: This study has been conducted on 108 children between 6-36 months old diagnosed with mid-shaft and distal hypospadias and underwent the TIP procedure. Cases have been divided randomly into two different groups each including 54 patients.

In control group, once the intervention was completed a dressing was applied with open urinary drainage using the double diaper technique. In this technique, the distal end of the catheter is taken out through the inner diaper.

The tip of the stent carefully positioned so that it passes through the hole in the nappy.

In control group, the dripping stent has been attached to a urine bag. It should be noted that kinking, twisting or blocking it must be avoided.

Finding and discussion: Mean age of patients was 20.4±9.7 months. 72, 2% of total cases have been diagnosed with distal shaft and 27.8% children were mid shaft. Results showed that the mean 24-hours urine volume in 22.2% children with closed drainage method and 11.1% children with open drainage method was lower than normal. None of the children have the complications such as dehiscence of wound, surgical wound infections, and surgical wound discharge.

It was demonstrated that closed method has some advantages compared with open drainage method, namely, lower complications such as bleeding at the surgical site, fever, and positive urine culture, urinary catheter removal by the patient, fistula, and stricture of urethra. Furthermore, it was shown that the occurrence of complications resulted from urinary catheter removal by patient was significantly different between two groups ($P<0.001$). Statistically speaking, the mean urinary catheter irrigation between two groups was significantly different ($P<0.001$).

Conclusion: It seems that double nappy method is more effective to decrease acute complications after surgery. This work was done on a comparative basis and further researches are recommended.

Association of urinary tract abnormalities in children with first urinary tract infection

Peyvasteh M, Askarpour SH, Ahmadzadeh A

Imam Hospital, Jundishapour University of Medical Sciences, Ahvaz, Iran

Background: Urinary Tract Infections (UTI) may be a variety of presentation of underlying urinary tract abnormalities including vesicoureteral reflex (VUR), obstructive uropathy, urolithiasis, and ureteral duplication. The long-term complications of UTI with these conditions are renal scarring, hypertension, and chronic renal failure. Objective: The aim of this study was to determine the incidence of urinary tract anomalies associated with first UTI.

Methods : We reviewed 158 patients (aged one month to 15 years) who were hospitalized with symptomatic UTI during a 2-year period. Patients with incomplete investigations were excluded from the study. One hundred twenty six patients (100 girls and 26 boys) were included in the study. Ninety-seven (77%) were under 5 years. Confirmed cases of UTI underwent renal and urinary tract ultrasonography (US), voiding cystourethrography (VCUG), and 99mTc-dimercaptosuccinc acid (DMSA) scan .

Results: The most common presentation was fever (83%) and dysuria (48%). The commonest causative agent was E coli (88%). VUR was found in 50 (39.6%), 39 girls, and 11 boys. Other urinary tract abnormalities were renal stone in 10 (8%) patients, pelvic ureteric junction obstruction in 8 (6.3%), neurogenic bladder in two boys and one girl, double collecting system in 2 girls, posterior urethral valves in two boys and ureterocele in one girl, respectively.

Conclusion: Forty percent of patients had VUR and 20% had other associated abnormalities in urinary tract. We recommend that US, VCUG and DMSA scan should be routinely performed on all patients after the first UTI.

دکتر لیلی مهاجرزاده، دکتر محسن روزرخ، دکتر احمد خالق نژاد طبری، دکتر علیرضا میرشمیرانی، دکتر کیوان ملک پور، خانم سایه هاتفی

PATIO repair for urethrocutaneous fistula after hypspadias surgery

Mohajerzadeh L,Rouzrokh M, Khaleghnejad Tabari A, Mirshemirani AL, Malekpoor K, Hatefi S

Pediatric Surgery Research Center, Mofid Children's Hospital,

Shaheed Beheshti University of Medical Sciences, Tehran, Iran

Aim: urethrocutaneous fistula after hypspadias repair remains a challenge for pediatric surgeon. A new technique has been explained in papers for management of urethrocutaneous fistula: the PATIO (‘preserve the tract and turn it inside out’) repair. We describe our skill with this technique in managing urethrocutaneous fistula following hypospadias repair.

Patients and Methods: in this prospective Children with penile urethrocutaneous fistulae <4 mm widest diameter underwent the PATIO technique of repair. Between June 2012 to January 2013 ,We established this procedure for 7 children with mean age 7.5 year(1.5-13 year) .Diameter of fistula were between 2-4 mm. Except in one patient with midshaft fistula, location of fistula were in distal. In past, Fistula underwent repair between one to five times.

Results: Mean duration of follow up was 4 month (3-7 month). The mean operating time was 15 min. Hospital stay was less than 12 hours and no catheter used postoperatively.

Recurrence of fistula was noted in 2 cases but 5 patients (70%) cured.

Conclusion: The PATIO repair is simple and easy to perform, with low morbidity, and is reliable in treating solitary urethrocutaneous fistula <4 mm in size.

دکتر امیر حسین حسینی، دکتر علی اصغر حلیمی اصل، دکتر پونه نبوی زاده، دکتر مصطفی شریفیان، دکتر عین الله آذرگشب

Can Procalcitonin Reduce Unnecessary voiding Cystoureterography in Children with First FebrileUrinaryTractInfection?

Hosseini AM (MD), Halimiasl AA(MD), Nabavizadeh P(MD), Sharifian M(MD), Azargashb E

Shahid Beheshti University of Medical Sciences, Tehran, Iran

Background: Recently, new predictors of VUR in children with a first febrile UTI such as Procalcitonin(PCT) were introduced as selective approaches for cystography. This study wants to show the capability of PCT in predicting presence of VUR at the first febrile UTI in children.

Methods: Patients between 1 month to 15 years of age with febrile UTI were included in this prospective study. PCT values were measured through a semi-quantitative method in four grades comprising values less than 0.5, 0.5-2.0, 2.0-10.0 and above 10.0 ng/mL the independence of PCT levels in predicting VUR were assessed after adjustment for all potential confounders using a logistic-regression model

Results: A total of 68 patients, 54 girls (79.4%) and 14 boys (20.6%) were evaluated in thisstudy.PCT level demonstrated a significant difference between patients with positive VUR and those with negative VUR (p=0.012).To calculate the independent factors that may predict the presence of VUR, all included variables were adjusted for age and sex. Results of logistic regression showed that a PCT level between 2.0 and 10.0 ng/mL could independently predict presence of VUR (Odds ratio=6.11, CI 95%= 1.22-30.77, p =0.028).

Conclusion: Our finding in this study showed that readily available semi-quantitative measures for PCT are feasible for detect in g patients with VUR. We suggest that in semi-quantitative measurements of PCT, levels between 2.0 and 10.0 ng/mL could be an in dependent predictor of positive VUR.

A comparison of Radiographic Cystography (VCUG) and Isotope Cystography (DRNC) in patients with urinary tract infections and normal VCUG

Dalirani R, Sharifian M, Mohkam M, Ghahsare Ardestani A

Pediatric Nephrology Research Center, Mofid Children's Hospital,

Shahid Beheshti University of Medical Sciences

Introduction: Vesicoureteral Reflux (VUR) is the back flow of urine from the bladder into the ureter and kidney mainly due to the failure of the normal function of valve at the junction of the ureter to the bladder. Ureteral reflux is an important risk factor for renal scarring in patients with or without urinary tract infection. In long term, renal scarring may lead to secondary hypertension and chronic renal failure. Early detection of VUR has an important role in the prevention of these complications. Radiographic cystography (VCUG) and isotope cystography (DRNC) are two common methods for detection of VUR. In some patients with strong evidence of VUR in clinical finding, ultrasound and DMSA, VCUG is normal. For this reason and the overall higher sensitivity of DRNS in detection of reflux, this study compares the result of VCUG and DRNC in patients who had evidence of VUR, but had normal VCUG.

Materials and Methods: In this study, 35 children (5 males, 30 females) with urinary tract infection and normal VCUG who had hydroureteronephrosis in ultrasound (without evidence of obstruction in the urinary tract) or significant involvement in DMSA scan or recurrent urinary tract infections had undergone isotope cystography (DRNC).

Results: After the DRNC among 70 ureteral units, reflux was observed in 33 units. Mild reflux in 17 units (51%), moderate reflux in 14 ureteral units (42%) and sever reflux in 2 units (6%).In 29 units of the 33 refluxing units, positive findings compatible with renal involvement in DMSA renal scan were observed.

Conclusion: This study showed that the DRNC is more sensitive in detecting VUR than VCUG. Therefore in patients with normal VCUG and high suspicion of VUR using DRNC is helpful. Although larger studies are necessary to this recommendation

دکتر مهران هیرادفر، دکتر مرجان جودی، دکتر پریسا سعیدی، دکتر احمد بذر افشان، دکتر رضا شجاعیان، دکتر رضا نظرزاده

Impact of children voiding habits on urodynamic studies

Hiradfar M, Joudi M, Saeedi P, Bazrafshan A, Shojaeian R, Nazarzadeh R

Sheikh Children's Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background: Many of the patients, who are evaluated by pediatric urologist because of urinary tract dysfunction, need urodynamic studies including urinary flow rate and bladder capacity for complimentary diagnosis.

One of the important problems in urodynamic evaluation of these patients is the nervousness and excitement of child while voiding in a strange style (western style) which causes unreliable results. Considering the above points, we decided to study and compare the uroflowmetery pattern and data of western style of voiding (the style which urodynamic devices are designed) with eastern style of voiding (The usual voiding style in eastern countries) and find the answer of this question that if there is any difference between these two styles or not.

Method: This research was a prospective cohort study on healthy preschool and school children and without any urologic diseases or complain or any other important disease. The cluster sampling was from boys and girls of some kindergartens and schools. Uroflowmeteric study was done for 15 girls and 15 boys in both eastern and western style of voiding and the results were compared. Those cases with pathologic (staccato) pattern were excluded.

Results: There was considerable difference between uroflowmeteric pattern of eastern and western style of voiding, especially in maximum flow rate, voiding volume and voiding time which can confirm the important role of child's habits and usual voiding behavior in uroflowmeteric pattern.

Conclusion: Considering the important role of urodynamic studies in diagnosis, screening and follow up of the patients with dysfunctional voiding problems and the direct impact of reliability of the data on physician's clinical judgment, it is important to attend to the usual and familial style of voiding in describing the uroflowmeteric data.

Evaluation of prenatal hydronephrosis and its outcome at the end of neonatal period in Ghazvin provinc

Sadeghipour Roudsari S, Moshiri A, Mohmmadi N, Qavami Q, Aboturabi SH

Qods Children Hospital, Qazvin University of Medical Sciences, Qazvin, Iran

Background: Prenatal hydronephrosis is a relatively common finding on ultrasonographies of pregnant women after 20^{th} weeks and could be a sign of anatomical anomalies of neonatal genitourinary system. Early diagnosis may result prevention of irreversible injuries to kidneys.

Methods: A sample of 62 pregnant women whom were diagnosed with unilateral or bilateral dilatation of *pyelocaliceal* system recruited to the study. Follow up ultrasonographies were performed at 30 and 34 weeks of pregnancy as well as 7, and 30 days after birth. VCUG and DTPA scan performed for all newborns with hydronephrosis at birth for diagnosis of Vesico-Ureteral Reflux (VUR), urinary obstruction, and other anomalies.

Results: Among 62 patients (45 males and 17 females), 19 bilateral, 29 left, and 14 right hydronephrosis were diagnosed. Oligo- and polyhydramnious diagnosed in only 2 cases and others were normal. VUR were reported in 11 newborns, mostly grades IV and V. Among all cases, 20 patients had a considerable obstruction and nine of them have operated due to obvious indications. Five of operated patients who followed up had successful outcome. After one year, 24 cases had normal ultrasonographies while 37 patients had some degree of dilatation.

Conclusion: follow up of prenatal hydronephrosis is recommended due to high rates of considerable obstruction and high grades of VUR after birth. Benefits include performing necessary interventions and prevention of serious injuries to kidneys.

Laparoscopic extravesical transperitoneal approach in the treatment of vesicoureteral reflux in children

Mohajerzadeh L, Khaleghnejad Tabari A, Rouzrokh M, Ghaffari P

Pediatric Surgery Research Center,

Shaheed Beheshti University of Medical Sciences, Tehran, Iran

Introduction: Many centers reported Laparoscopy in the management of vesicoureteral reflux (VUR).We report

Our initial experience in the treatment of VUR by laparoscopic extra-vesicaltransperitoneal approach

Following the Lich-Gregoir technique to explain the development and to assess the consequences and Benefits of this method for these patients

Materials and Methods: Between September 2012and February 2013, 4 children (3 female

&1 male) at Mofid Children's Hospital with VUR and deterioration of renal function on isotope scan and recurrent UTI (3 unilateral and 1bilateral) were treated with Laparoscopic approach, and in 2cases with unilateral VUR we could completely treated in this approach .The mean age was 6 (range, 4 to 10) years.3 cases had unilateral VUR grade III –IV. One case had bilateral reflux and neurogenic bladder with recurrent symptomatic urinary infection while receiving adequate antibiotic therapy and appropriate catheterization techniques and drug.

Results: 2 cases with unilateral VUR were successfully completed laparoscopically, and the reflux was corrected

In all 2 patients the mean surgical time was 120 minutes .Hospital stay was 2 day the follow-up was 6 months, without recurrence of VUR. cystogram was performed 5 months post operation . In case of bilateral VUR and neurogenic bladder detrusor muscle flap were freed but because of uncontrolled bleeding converted to open. In one case with unilateral VUR despite completely freeing detrusor muscle flap because prolonged duration of surgery converted to open.

Conclusion: With this limited experience we have convinced that laparoscopic extra vesical transperitoneal approach (Lich-Gregoir technique) in the treatment of VUR is a safe and acceptable approach this technique results in a shorter hospital stay, less postoperative discomfort, and a low morbidity.

دکتر مهران هیرادفر، دکتر مرجان جودی، دکتر پریسا سعیدی، دکتر احمد بذر افشان، دکتر رضا شجاعیان،
دکتر رضا نظرزاده

Pediatric laparoscopic pyeloplasty with extra-corporal anastomosis: easier, less gas insufflations and shorter time

Hiradfar M, Joudi M, Saeedi P, Bazrafshan A, Shojaeian R, Nazarzadeh R

Sheikh Children's Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Aim: Laparoscopic pyeloplasty is rapidly becoming acceptable as a minimally invasive alternative to open pyeloplasty for treatment of ureteropelvic junction obstruction (UPJO) in children but gaining perfect results in this field needs advanced laparoscopic skills and instruments. According to unique tissue characteristics in children and hypermobility of organs and small abdominal cavity, we have modified the standard laparoscopic approach to facilitate the procedure.

Methods: Modified laparoscopic UPJO repair was performed in 36 cases (40 units of kidneys) from 2008 to 2011. Age range was from 8 days to 4 years. This modified intraperitoneal method is performed by insertion of a 5 mm port for camera and two stabs for portless instrument insertion. After finding and mobilizing the UPJ, it was pulled out through the nearest stab wound which was dilated a little by a clamp. Stenotic segment resection, dismembered pyeloplasty and anastomosis were done extra-corporally over a double J stent. After removal of the DJ stent all cases were followed by ultra-sonography and finally by DTPA scan after 10 months.

Results: Five cases were excluded from the study due to missed follow up. In all cases except 2, significant reduction in antroposterior diameter of kidney pelvic was observed (Preoperative= 76.4 to postoperative=43.2, P value<0.01). 2 cases needed reinsertion of DJ stent and one of them finally needed an open redo pyeloplasty. Mean operative time was 97.4±6.33 mins. Mean gas insufflations time was 34.5±11.7 mins.

Conclusion: It seems that this modification can improve the time of operation, lessens gas insufflations' time and made minimally invasive pyeloplasty more feasible with acceptable results.

دکتر علیرضا میر شمیرانی، دکتر محسن روزرخ، دکتر احمد خالق نژاد طبری، دکتر ناصر صادقیان، دکتر لیلی مهاجرزاده، دکتر مصطفی شریفیان، دکتر معصومه محکم، دکتر شقایق حساس یگانه

Protective temporary vesicostomy for upper urinary tract Problems in children: A five-year experience

[1]Mirshemirani A, [1]Rouzrokh M, [1]Khaleghnejad-Tabari A, [1]Sadeghian N,

[1]Mohajerzadeh L, [2]Sharifian M, [2]Mohkam M, [1]Hasas-yeganeh SH

[1]Pediatric Surgery Research Center, Shaheed Beheshti University of Medical Sciences, Tehran-Iran
[2]Pediatric Nephrology Research Center, Shaheed Beheshti University of Medical Sciences, Tehran-Iran

Abstract: Background: Temporary vesicostomy is a urinary diversion procedure for patients with upper urinary tract (UUT) dilatation, secondary to bladder outlet obstruction or dysfunction. The aim of this study is to evaluate our experience in children undergoing such diversion, analyzing its efficacy to prevent urinary tract infection (UTI), improve or resolve hydronephrosis, stabilize or improve kidney function and restoring the health of UUT.
Materials/Methods: In this retrospective study 53 patients underwent vesicostomy by Blocksom1 technique due to bladder outlet obstruction or dysfunction in Mofid children's hospital From March 2007 to March 2012. The reason for applying this procedure was failure in clinical treatment. Data regarding gender, age, diagnosis, time of any surgical intervention, associated anomalies, primary/secondary complications and mortality were collected using a questionnaire, and evaluated by giving a grade that ranged from 0(worst) to 10 (best) based on Lickert's scale. Data analysis was carried out using SPSS 16 software.
Results: From a total number of 53 patients, 47(88.7%) were male and 6(11.3%) female, with a mean age of 225 days (range, 2 days to 6 years). Thirty three (62.3%) cases had posterior urethral valve (PUV) and 15(28.3%) neurogenic bladder (NGB).UTI was present in all cases (100%), hydronephrosis in 52(98.1%), and vesico-ureteral reflux (VUR) only in 45(84.9%) patients. The most common associated anomalies were multicystic kidney disease, myelomeningocele, PDA and kidney hypoplasia or dysplasia. Valve ablation was performed in 17 cases, and clean intermittent catheterization (CIC) in14 patients which were unsuccessful. We performed vesicostomy in all patients. Complications related to vesicostomy were dermatitis in 10 cases, mild stomal stenosis in 3 patients and mucosal prolapse in 2 cases. Four patients had renal failure, one of them still is under treatment, and our mortality rate was 4(7.5%). Vesicostomy was closed in 35 patients. The mean period of having vesicostomy was 13.8 months. Mean follow-up was 35 months. Cure rate was 84.3% in UTI, 82.3% in hydronephrosis, 80% in VUR, and 85% in kidney function.

Conclusion: Vesicostomy is a simple procedure that protects upper urinary tract, decreases hydronephrosis, and improves kidney function. The procedure is well tolerated and reversible, with less complication and should be considered in children in whom conservative and medical treatment has failed.

Surgical Treatment of 70 Patients Under 15 Years with Vesico Ureteral Reflux in Alzahra Hospital in Isfahan

Rafiee MH

Department of Pediatric Surgery, Isfahan University of Medical Sciences, Isfahan, Iran

AIM: Vesico ureteral reflux is common among population (1-2%). In the presence of UTI its incidence reaches 30-50%. In the event of lack of suitable treatment this disease may cause renal failure hypertension, growth failure and in advanced forms need to dialysis and kidney transplantation.

Materials and methods: In this study 70 patients under 15Y with VUR being hospitalized in Al –Zahra Hospital between 1996 -2006 were reviewed. Data were analyzed in computer. Chi-square test has been used in this study and $P<0.05$ has been supposed as significant.

Results: The average age of the patients was 6Y (Ranging 1 month -13Y).61% of patients were female and 39% were male. Reflux was bilateral in 61% and unilateral in 39% of patients. 78% of patients had primary VUR and 22% had secondary VUR. Grading of VUR consisted of: GI (4.3%), GII (7.14%), GIII (20%), GIV (55.7%) and GV (12.8%).

62 patients were treated surgically and 8 patients were treated medically. Type of operation in 30(48/3%) of patients was Gil–vernet method, 15 patients (24.1%) politano –lead better, 7 patients Cohen 3 patients Glen –Anderson, 3 patients common sheet reimplantation and 4 patients lich –Gregoir. Post operative complications consisted of: urethral obstruction 3 cases, bleeding 2 cases, bladder stone I case neuropathic bladder I case . Recurrence after 9 months was zero in Gil-vernet, 3 cases in Politano lead better and I case in Cohen method.

Conclusion: The total success rate after open surgery is very high (95-99% in texts and 90% in the present study). We did not do sting operation in our patients. Sting operation is success full in 75-90% of cases. We have to do open surgery in the event of recurrence after sting operation.

Interventional Options in the Management of Primary Obstructive Megaureters (POM), Ureterovesical Junction Obstruction (UVJO), Unilateral and Bilateral Type with Emphasis in JJ Urethral Insertion, Experience in 30 Patients

[1]Bazrafshan A, [2]Davachi B, [3]Tabatabaee A

[1]Department of pediatric surgery, Mashhad University of Medical Sciences, Mashhad, Iran
[2]Department of Radiology, Mashhad University of Medical Sciences, Mashhad, Iran
[3]Department of Pathology, Mashhad University of Medical Sciences, Mashhad, Iran

BACKGROUND: The aim of this study is shown that when intervention is necessary for POM, excision of the obstructed segment, tapering of the distal ureter and anti reflux reimplantation in the patients > 4 months age with success rate greater than 80% is the first choice. If this technique is impossible, JJ ureteral stenting (cystoscopic or open) is the first temporary intervention for urinary diversion, then anti reflux surgery (till > 4 months age) with more than 75% success rate. End ureterostomy is better to forgot because of poor prognosis especially in bilateral POM.

METHODS: 30 patients with POM (Diagnosed and proved by prenatal and postnatal ultrosonography, VCUG, DMSA and DTPA isotope renal scan, Urinalysis …) that were eligible for interventions (ages: 2 days – 12 years, median age 9 months) admitted to the pediatric surgical ward of Mashhad university of Islamic republic of Iran.

RESULTS: Demographic of these patients and interventions are presented in table

Table 2 : Results

Interventions	Results
primary antireflux surgery10	Ipsilateral nephrectomy 1(10%), Vesicoureteral reflux after antireflux surgery 1 (10%), Good and excellent 8 (80%)
End ureterostomy and antireflux surgery 12	Mortality 1 (8.33%), vesicotomy 2 (16.66%), Enterocystoplasty 2 (16.66%), Vesicoureteral reflux after antireflux surgery 2 (16.66%), Good and excellent (41.66%)
JJ stenting and antireflux surgery 8: (cystoscopic 4, open 4)	Vesicoureteral reflux after antireflux surgery 2 (25%) Good and excellent 6 (75%)

1. Early diagnosis of UVJO and start prophylactic antibiotics
2. Work up for confirming UVJO as soon as possible (by: ph. Exam, US, VCUG, Isotope scan, rarely I.V.P)
3. Primary anti reflux surgery (can do in patients older than 4 months, urodynamic outcome in patients who underwent ureteral reimplantation before or after 1 year of age no significant difference in bladder capacity, compliance or instability was found)[25]
4. If not possible, JJ insertion (cystoscopic or open) is the second choice (especially in bilateral type that have small bladder) then antireflux surgery (if necessary).
5. Ureterostomy is the last option (because have many complications and poor results specially in bilateral type)

A Single Stenting with Percutaneous Externalized Nephroureteral 5 Fr Catheter (Feeding Tube) is Sufficient as a Sole Protective Measure for Pyeloplasty in Infants and Children – Experience with 142 patients

Mollaeian M, Mollaeian A, Eskandari F, Salamati P

Bahrami Children's Hospital, Tehran University of Medical Sciences, Tehran, Iran

Objective: There is an ongoing debate among pediatric urologists over the determination of the optimal method to use in postoperative diversion of the reconstructed renal collecting system in order to prevent leakage and obstruction after pyeloplasty in children. In this article, we present our clinical trial experience using a single percutaneous externalized nephroureteral (NU) 5Fr catheter (infant feeding tube) with multiple side holes as the sole instrument of drainage to provide protective mechanism, thereby alleviating the need for nephrostomy tube, internal DJ stent, peri-nephric drain, or Foley catheter. The 5Fr catheter which we use combines the attributes of nephrostomy tube diversion and anastomotic stent in a single tube.

Materials and Methods: We analyzed the charts of 142 patients who underwent pyeloplasty from August 2001 through October 2008.We used a single externalized NU 5Fr catheter with multiple side holes as the sole method of drainage for postoperative upper tract diversion. We did not use nephrostomy tube, internal DJ stent, perinephric drain and bladder catheter in any of these cases. In each case, the repaired UPJ was evaluated with a contrast study through catheter 12 days after surgery and the catheter was removed without further anesthesia. Complications from the use of this catheter including catheter functioning poorly, premature dislodgement, urinary tract infection, leakage, urinoma, and restenosis were noted.

Results: A total of 148 pyeloplasty procedures were performed on 142 patients in this study, including six with bilateral UPJO, and ten recurrent cases. The average and the range for postoperative hospitalization were 2 days and 1-3 days respectively. Contrast study through catheter demonstrated excellent drainage across the repair with no leaks in any of the patients. Immediate post catheter removal febrile UTI and transient obstructive symptoms and signs occurred in 15 patients. They responded to medical management comfortably and did not require any further procedures. However, two of these 15 patients were operated on for re-stenosis during the long-term follow-up period.

Conclusion: Using a percutaneous externalized nephroureteral NU 5Fr catheter with multiple side holes as the sole instrument for upper tract diversion is sufficient as a protective measure after open pyeloplasty. We recommend that this single 5Fr catheter be considered as a replacement for all other instruments listed above. The technique described in this article prevents leakage and results in patent anastomosis with only a few notable complications.

دکتر علیرضا میرشمیرانی، دکتر احمد خالق نژاد طبری، دکتر محسن روزرخ، دکتر نگار صادقیان، دکتر افسانه صادقی، دکتر لیلی مهاجرزاده، دکتر شقایق حساس یگانه، دکتر مصطفی شریفیان

Posterior Urethral Valves (A single center experience)

[1]Mirshemirani A, [1]Khaleghnejad Tabari A, [1]Rouzrokh M, [1]Sadeghian N,

[3]Sadeghi A, [1]Mohajerzadeh L, [1]Hasas-yeganeh SH, [2]Sharifian M

[1]Pediatric Surgery Research Center, Shaheed Beheshti University of Medical Sciences Tehran- Iran

[2]Pediatric Nephrology Research Center, Shaheed Beheshti University of Medical Sciences Tehran- Iran

[3]Department of Pediatric Anesthesiology, Shaheed Beheshi University of Medical Sciences, Tehran- Iran

Background: Posterior urethral valves (PUV) is the most common cause of bladder outlet obstruction in infancy that impairs renal and bladder function. In this study we evaluate long-term outcome of patients with previous PUV.
Aims& objectives: This study was planned at Pediatric Surgery & Pediatric Nephrology Research Centers, Mofid Children's Hospital, to evaluate &record the various clinical presentations &management, complications, and surgical management of PUV.

Materials/Methods: 98 patients with various symptoms and signs of PUV were detected and evaluated in Mofid Children's Hospital from January 2007 to December 2012. Detailed history, para-clinical examinations were performed for each patient and diagnosis was confirmed by Micturating CystoUrethroGram (MCUG). PUV were ablated in 62 patients by electric hook, and diversion was performed in 42(42.85%) cases. Data analysis was carried out using SPSS 16 software.

Results: Totally 98 patients with the age of one day to two years (mean age of 62 days)were included in this study.57 cases were catheterized within one to 6 days of age (mean age one day),PUV were ablated in 62 patients by electric hook ,and diversion were performed in 42 cases. The most common symptom in our group was dribbling poor stream 51%, followed by urinary infection (UTI) 40.8%.there were Vesico-Uretrel-Reflux (VUR) in61.2%, and hydronephrosis in 82.6%. Most common associated anomaly was Kidney anomalies (polycystic kidney disease/Agenesis) in 8 patients (8.2%). complication occurred in three patients (3.06%).Mortality was in 5 (5.1%) patients. Mean follow-up period was 3.4 years (1.5 months to 14 years).

Conclusion: Urinary drainage by feeding tube in early days of infancy, followed by valve ablation is the best treatment in PUV, and urinary diversion improves the outcome. MCUG is still the gold-standard imaging modality for documenting PUVs. The factors like renal dysplasia and UTI have their role in final outcome.

Improvement of renal function after relief of chronic partial upper urinary tract obstruction

[1]Davari HA, [2]Haghighi M, [3]Shahi Z, [4]Hasanzad Azar M

Department of Pediatric Surgery, Isfahan University of Medical Science, Isfahan, Iran

Background: Functional and anatomical changes reversibility of kidneys after treatment of partial obstruction due to Uretro-Pelvic Junction Obstruction (UPJO) was not defined well. Therefore, in this clinical trial study, we evaluated these changes.

Methods & Materials: In a clinical trial study with non random-simple sampling, 32 patients with chronic partial obstruction of kidneys due to unilateral UPJO were studied. In each patient, IVU, DMSA, DTPA and kidney sonography of both kidneys were evaluated pre and post operatively. Paired t-test, Wilcox on and McNemar tests analyzed data P less 0.05 was significant.

Results: Mean of age patients was 5.44 ± 0.47 year old and 40.6 % of patients were male. Split function mean in DMSA has significant difference pre vs. post operatively, ($p<0.05$). There also was a significant difference in mean of retention time and T1/2 of DTPA ($p<0.05$), mean of kidneys vs. affected one ($P<0.05$). Mean of kidney pelvis diameter had significant difference pre vs. post operatively ($p<0.05$)

Conclusion: Our study showed that operation of chronic partial obstruction of kidney, could improve kidney function. We also showed that

دکتر محمود سعیدا،دکتر احمد خالق نژاد طبری، دکتر علیرضا میرشمیرانی، دکتر لیلی مهاجرزاده، دکتر محسن روزرخ، دکتر شقایق حساس یگانه، دکتر نسیبه خالق نژاد طبری، دکتر علی عسکری، دکتر جهانبخش، سایه هاتفی

The Experience with a New Modification to Lich-Gregoir Extravesical Detrusorrhaphy

Saeeda M, Khaleghnejad Tabari A, Mirshemirani A, Mohajerzadeh L, Rouzrokh M, Hassas Yeganeh SH, Khaleghnejad Tabari N, Aliaskari A, Jahanbakhsh G, Hatefi S

Pediatric Surgery Research Center,
Shaheed Beheshti University of Medical Sciences, Tehran, Iran
Department of Pediatric Surgery, Milad General Hospital, Tehran, Iran

Purpose: Open surgical management is the gold standard for treatment of vesicoureteral reflux, there is still no consensus to introduce the best suitable technique. We report our experience with new technique employing some modifications of Lich-Gregoir extravesical detrusorrhaphy.

Materials and Methods: 164 patients with 262 vesicoureteral units underwent extravesical surgical treatment, from Feb. 2006 to Feb. 2011. Following mobilization, of distal ureter, detrusor muscle incised and flaps developed from the ureterovesical junction to a point according to Paquins' rule. We used continuous 5/0 Vicryl suture starting at uppermost part of muscle flaps, the first stitch includes a bite of ureteric wall for maintaining suitable intramural length of ureter, thus alleviating the need for anchoring suture at the ureterovesical junction but this junction inverted into bladder by separate suture. We didn't use any drain or Foley catheter, except for bilateral reimplantation which bladder drainage employed only for 48 hours. All patients put on prophylactic antibiotic for three months and then evaluated by VCUG .

Results: Of 164 patients, 47 (28.7 %) boys, 117 (71.3 %) girls. mean age was 67.6 months (1to 12 years). 65 (39.6 %) unilateral, 99 (59%) bilateral, 77.4% were grade III and IV refluxes. Mean operative time was 45minutes. Mean hospital stay was 1.5±2. Mean follow-up was 48±9 months. 157 (95.7%) patients refluxes were stopped in follow-up VCUG, 3 months postop. and 7 (4.3%) patients had persistent, downgraded reflux. At one-year follow-up reflux subsided in three and other four, underwent redo surgery.6 (3.6 %) bilateral cases had early complications of which 3 had ureteric obstruction secondary to severe edema resulted in rising creatinine, who treated by temporary double J stent and two case had long urinary retention that treated by temporary cystostomy .and one patient was underwent left nephrectomy due to none functional left kidney.

Conclusion: Our technique which is a modification to Lich-Gregoir technique is easy-to-perform with high success rate and short hospital stay and seems to be suitable for correction of all cases of vesicoureteral reflux.

Fetal intervention in Obstructive uropathy

Ashrafi Amineh M

Department of Pediatric Surgery, Isfahan University of Medical Sciences

Isfahan, Iran

The incidence of fetal obstructive uropathies is about %2. Severe pathology occurs, in1/5oo fetuses. Posterior urethral valves are the most common cause. %9 of the fetaluropathies .Posterior urethral valves (PUVs) are the leading cause of antenatally diagnosed lower urinary tract.

PUVs are found only in the male population. The mortality rate in these patients has been reported to be as high as 63%, especially when it is associated with severe oligohydramnios owing to pulmonary hypoplasia .The natural history and outcome of antenatally diagnosed obstructiv europathy differ significantly from those of postnatally diagnosed obstruction. Reports of PUVs diagnosed at birth reveal a significant mortality associated with respiratory and renal insufficiency .When oligohydramnios develops during the canalicular stage of lung development (16 to 24 weeks), the fetus usually has pulmonary hypoplasia that precludes survival. When in utero intervention for obstructive uropathy associated with oligohydramnios restores amniotic fluid volume, neonatal demise from pulmonary hypoplasia is clearly averted. oligohydramnios owing to PUV is also associated with clubfoot and Potter facies, and there is a 9% incidence of chromosomal anomalies in obstructive uropathy.

With current techniques, fetal ultrasonography may detect urinary tract anomalies as early as 12 to 13 weeks of gestation. A recent prospective study correlating screening ultrasonography in patients 16 to 23 weeks' gestation with postnatal outcome revealed that a pelvic diameter greater than 4 mm was 76% sensitive in identifying a pathologic obstruction.

For fetuses older than 23 weeks gestation, threshold values associated with pathologic fetal hydronephrosis are an AP pelvic diameter greater than 10 mm and an AP pelvic–to–AP renal diameter ratio greater than 0.5. The additional finding of caliectasis provides even stronger support to a pathologic etiology. If any of these criteria are met, the patient should undergo further sonographic assessment and a full prognostic profile, including sequential taps of the fetal bladder for urinary electrolyte determination if oligohydramnios develops in a case of suspected bladder outlet obstruction. The usefulness of assessing urine chemistry in fetal obstructive uropathy lies in the separation of fetuses into "good" or "poor" prognostic categories based on preservation of renal function reflected by the tonicity of the fetal urine. In one study, urine samples taken from fetuses who subsequently had a good outcome revealed levels of Na+ less than 100 mEq/L, Cl less than 90 mEq/L, and osmolarity less than 210 mOsm/L. These values were chosen because they were two standard deviations from the mean values of fetuses with a good prognosis. Fetuses with urine chemistries beyond these values had irreversible renal damage and suffered from severe oligohydramnios and pulmonary insufficiency.

Urinary β2-microglobulin levels have become an important adjunct in predicting the severity of renal damage. In one study, β2-microglobulin levels below 2 mg/L were found to have as good a predictive value as urinary sodium levels below 70 mEq/L.

Furthermore, urinary β2-microglobulin levels may have greater value in predicting the outcome of fetal obstructive uropathy in the absence of oligohydramnios. The two goals of prenatal intervention in fetal obstructive uropathy are decompression of the obstructed fetal urinary bladder and restoration of amniotic fluid dynamics. Percutaneous vesicoamniotic shunting has been the most common technique used to accomplish these goals with minimal maternal morbidity in patients with isolated lower urinary tract obstruction and a good prognostic profile.

Two-Stage Palatoplasty Using a Modified Furlow Procedure and preliminary reports on Trans Oral Robotic Cleft Surgery (TORCS)

Nadjmi N

Professor and coordinating program director for OMFS at the University of Antwerp (UA), Belgium

Objective: A two-stage palatal repair using a modification of Furlowpalatoplastyis presented. The authors investigate the speech outcome, fistula formation and maxillary growth. Further the recent use of TORCS and its potential advantages are discussed.

Methods: In a prospective, successive cohort study, 40 nonsyndromic patients with wide cleft palate were operated between March 2001 and June 2006 by a single surgeon. Ten patients in the first cohort underwent aFurlowpalatoplasty(control group). In thirty patients in the second cohort a unilateral myomucosal cheek flap was used in combination with a modified Furlowpalatoplasty (study group). The hard palate was closed in both groups 9 to 12 months later.

Result: The Bzoch Speech quality score was superior in the study group, and the hypernasality was significantly reduced in the study group. Overall fistula formation was 0 %. At the time of hard palate reconstruction palatal cleft width was significantly reduced. Relative short-term follow up of maxillary growth was excellent.

There were no postoperative haematomas, infections, or episodes of airway obstruction.

Conclusion: This technique is particularly encouraging, because of better speech outcome, absence of raw surfaces on the soft palate, no fistula formation, and a good maxillary growth.

Further follow-up is necessary to determine the long-term effects on facial development.

Importance of the neo-adjuvant setting to the success of immune therapy of cancer

Farzin Farzaneh

DPhil, FRCPath, FRSA, FSB

Professor of Molecular Medicine, King's College London

Immune mediated rejection of established tumours need not only the adequate stimulation of cell-mediated immunity, but also the suppression of inhibitory responses that are induced by chronic exposure to tumour associated antigens, as well as adequate reduction in the tumour mass. That is the prior establishment of minimal residual disease by surgery and/or chemo/radiotherapy, and immune therapy as a strategy aimed at achieving deeper and longer lasting remissions, thus permitting longer disease free survival.

Pre-clinical studies have demonstrated that tumour cells expressing immune co-stimulatory molecules and the appropriate Th1 cytokines can induce immune mediated rejection of previously established tumours. We are now assessing this strategy in a Phase-I clinical study of relapsed poor prognosis acute myeloid leukaemia (AML), consisting of vaccination with autologous AML cells that are genetically modified to express B7.1 (CD80) and IL-2.

A much more desirable alternative to such cell and gene therapy based vaccination strategies would be direct vaccination with tumour associated antigens, provided that the vaccine could indeed induce an adequate cell mediated immunity. With this goal in mind we have recently developed a new vaccination strategy based on the use of combined adjuvants for synergistic activation of cellular immunity (CASAC). CASAC contains different combinations of defined molecules that act synergistically to induce dendritic cell activation. Subcutaneous vaccination with two doses of a single peptide (OVA or Trp2) plus CASAC, induces IL-12 secretion, stimulation of Th1-biased CD4 T-cells, and high levels of antigen specific cytolytic CD8 T cells (routinely >20% by tetramer staining). The magnitude of CASAC mediated immune stimulation is substantially greater than can be achieved by other adjuvants (*e.g.* 10-100 fold greater than complete Freund's adjuvant). The antigen specific CTL activity induced by CASAC mediated peptide vaccination allows the *in vivo* lysis of greater than 90% of antigen positive tumour cells in mouse tumour models, resulting in long-lasting immunity with a robust recall response. This strategy is now being developed for therapeutic vaccinations against leukaemia and solid tumours with associated over expression of Wilms' Tumour-1 (WT1).

Etiology of acute scrotal pain in children and adolescent patients admitted in Ahvaz Teaching Hospitals

Askarpour SH, Peyvasteh M, Javaherizadeh H, Baghery Y

Department of Pediatric Surgery, Imam Hospital, Jundishapour University of Medical Sciences, Ahvaz, Iran

Background: Acute scrotum is an emergency condition requiring rapid intervention. The aim of this study was to evaluate the clinical and epidemiological specifications of acute scrotum.

Methods: This retrospective study was carried out on patients less than 21 years admitted with a diagnosis of acute scrotum in the surgical and medical wards from 2009 to 2010. One hundred and thirty-nine patients were included in this study .

Results : The final diagnoses were as follows: spermatic cord torsion (41. %), incarcerated inguinal hernia (21%), epididymo-orchitis (20%), missed torsion (10%), testicular trauma (3%), and torsion of the appendix of the testis (2%). The most common age groups in relation to the diagnoses were as follows: testicular torsion and missed torsion (10–15 years, 34%), torsion of appendix testis (10–15 years, 100%), epididymo-orchitis (15–21 years, 85%), and incarcerated inguinal hernia with two peaks of age (<5 years, 46%). Fifty-eight patients (41%) visited the hospital less than 6 h after the onset of pain. Twenty-eight patients underwent orchiectomy or orchiopexy and 38 patients underwent detorsion and bilateral orchiopexy. Other procedures were carried out in seven patients. Out of 72 patients diagnosed with torsion (57 patients) or missed torsion (15 patients), 38 patients (52%) underwent a testicular salvage surgery (detorsion and orchiopexy). Out of all patients (139 patients), 92 patients underwent surgery and the rest (47 patients) were treated conservatively .

Conclusion : The most common important differential diagnosis for acute scrotum is spermatic cord torsion. Most of the abnormal urinary findings were observed in patients with epididymo-orchitis. Most of the patients underwent surgery less than 6 h of disease onset. In patients with spermatic cord torsion, the affected testis has to be evaluated and treated during the first 6 h of presentation.

A child with acute urinary obstruction due to complicated balanopostitis

Nahvi H

Department of Pediatric Surgery, Tehran University of Medical Science, Tehran, Iran

The term “balanopostitis” is used to describe inflammation of the glans penis and the prepuce usually in uncircumcised males.

The etiology of balanopostitisis multi-factorial in children, but typically results from poor hygiene that is sometimes complicated by secondary infection

With general treatment, most patients with balanopostitis have complete resolution of symptoms. In selected cases, topical or oral antibiotic therapy may be indicated. Pediatric surgeon consultation is reserved for patients with acute urinary obstruction, prolonged and refractory disease course, recurrence, or development of pathologic phimosis.

Balanitis, inflammation of the glans penis only, often occurs in conjunction with diaper dermatitis in young boys, both circumcised and uncircumcised.

Local care and topical treatment aimed at the most likely etiology is rapidly curative and similar to balanopostitis.

Balanitis and balanopostitis must be differentiated from lesions that are sexually transmitted, indicative of systemic disease, or precancerous.

These lesions are more common in adolescents and adults.

This article will present a case of a child with acute urinary obstruction due to complicated balanopostitis and discuss the clinical manifestations, diagnosis, and treatment of balanopostitis in children.

دکتر هوشنگ پورنگ، دکتر فرید اسکندری، دکتر منصور ملائیان، دکتر محمد اسماعیل دارابی، دکتر میترا آذرشاهین، دکتر ابراهیم اسپهبدی

Congenital spigelian hernias and cryptorchidism – a Case Report

[1]Pourang H, [1]Eskandari F, [1]Mollaeian M, [2]Esmaeel Darabi M, [2]Azarshahin M, [2]Espahbodi E

[1]Department of Paediatric Surgery, Bahrami Children's Hospital,

Tehran University of Medical Science, Tehran, Iran

[2]Department of Paediatric Anesthesiology, Bahrami Children's Hospital,

Tehran University of Medical Sciences, Tehran, Iran

Background: Spigelian hernias in childhood are rare. Although in literatures, a few infants with spigelian hernias have been identified to have cryptorchidism. Spigelian hernias are more commonly seen in the adult population and are considered to be an acquired disease because they are typically associated with trauma or other causes of increased intra-abdominal pressure. However, the etiology in infants is still unknown, but a congenital defect in abdominal wall might be responsible for this.

Case presentation: This patient was a 6 months old baby boy with a right abdominal bulging and bilateral cryptorchidism. In ultrasonographic evaluation a hernia sac was found at the lateral border of right rectus abdominis muscle. The sac was opened during surgical exploration. There was a sliding hernia sac which contained testis and cord. The testis was pulled into the scrotum after releasing from the sac and orchiopexy was done. Abdominal wall defect was repaired.

Evaluation of Antioxidative/Oxidative Status and Prolidase Parameters in Cases of Inguinal Hernia with Joint Hypermobility Syndrome

[1]Muazez Cevik, [2]Pelin Yazgan, [3]Nurten Aksoy

[1]Department of Pediatric Surgery, Harran University, Faculty of Medicine, Sanliurfa, Turkey

[2]Department of Physical Medicine and Rehabilitation, Harran University, Faculty of Medicine, Sanliurfa, Turkey

[3]Department of Clinical Biochemistry, Harran University, Faculty of Medicine, Sanliurfa, Turkey

Background: Previous findings have mostly described the basic mechanisms of inguinal hernia and joint hypermobility syndrome as insufficient strength and metabolism of collagen. The aim of this study was to evaluate whether prolidase and oxidative stress parameters in inguinal hernia children with joint hypermobility syndrome.

Material and method: A cross-sectional study was conducted of 41 cases of inguinal hernia treated in the pediatric surgery department from May to December, 2011 was performed. The sacs of hernia were analyzed by total antioxidative/oxidative status and prolidase activity. Cases were divided into two groups (inguinal hernia with hypermobile and without) related to the cut-off point of Beighton's score (≥6).

Results: Forty one cases aged between 3 and 12 (5.36±2.96) years had participated. Eleven cases were hypermobile while 30 cases were nonhypermobile. There were no gender and body weight index differences between the groups. However, the study revealed statistically differences between the groups related in terms of Beighton's score, levels of total oxidant status, oxidative stress index, and prolidase ($P<0.001$).

Conclusions: Our results show that decreased prolidase and oxidative stress along with decreased oxidative stress index in joint hypermobility syndrome associated inguinal hernia.

دکتر مرتضی محمودی، دکتر احمد خالق نژاد طبری، دکتر علیرضا میرشمیرانی، دکتر محسن روزرخ ، دکتر رضا باقری پور، دکتر پرند غفاری، دکتر بیژن حاتمیان

Early Exploration in the Management of Acute Scrotum in Children

Mahmoudi M(MD), Khaleghnejad Tabari A(MD), Mirshemirani A(MD), Rouzrokh M(MD), Bagheripour R(MD), Ghaffari P(MD), Hatamian B(MD)

Pediatric Surgery Research Center,

Shaheed Beheshti University of Medical Sciences, Tehran, Iran

Objective: Acute scrotal conditions are a common clinical setting that present with pain and swelling of the hemiscrotum. The aim of our study has been to evaluate the findings in boys operated on acute scrotum.

Methods: A descriptive study was conducted on 100 patients with acute scrotum admitted to Mofid Children's Hospital from March 1993 to March 2007. Data included history, age, primary symptoms, definite diagnosis, side involvement, paraclinical tests, imaging modalities, medical or surgical management and type of the surgery.

Findings: Diagnosis was made mainly by clinical signs and symptoms and surgical exploration. Torsion of testis (n=31) was the most common cause of acute scrotum followed by incarcerated inguinal hernia (n=30), torsion of testicular appendage (n=27), epididymo-orchitis (n=7), idiopathic scrotal edema (n=4) and hematocele (n=1). Most (34%) of the patients were in the first year of life and the mean age was 5.4 years. The commonest signs were pain and swelling (62%) followed by pain, swelling and redness (21%) and pain alone (16%). 83 patients consisting of 31 with torsion of testis, 14 with torsion of testicular appendage, 30 with incarcerated hernia and 7 with epididymo–orchitis underwent surgical exploration after careful physical examination. 10 of 31 patients with torsion of testis had orchiectomy and orchiopexy of contra–lateral testis and the rest had detorsion and bilateral orchiopexy. 80% of patients were referred to the hospital after 12 hours of clinical onset of symptoms.

Conclusion: Early exploration of scrotum based on careful physical examination excludes the risk of misdiagnosis by diagnostic procedures and unnecessary delay by diagnostic techniques. Exploration of scrotum is a relatively safe and simple procedure with good cosmetic results; it also allows an accurate diagnosis to be made.

دکتر مجتبی موسوی خوشدل، دکتر سید جواد نصیری، دکتر صلا ح الدین دلشاد، دکتر پیروز فرهود، دکتر فریبا جهانگیری، دکتر مریم قوامی عادل

The First Report of 60 Mini-Laparoscopic Repair of Hernia in Iran

Mousavi Khoshdel A, Nasiri J, Delshad S, Farhoud P, Jahangiri F, Ghavami Adel M

Department of Pediatric Surgery, Ali Asghar Children's Hospital,

Tehran University of Medical Sciences

Ingoinal hernia repair is the most common pediatric surgery. Subcutaneous endoscopically assisted ligation (SEAL) is a new technique for high ligation of hernia sac.

We reported 60 cases of inguinal hernia operated in our center. Mean operative time was 14 minutes. No conversion to open surgery was seen. No recurrent hernia was reported in fallow up period.

This technique has several advantages among them are: detection of contra lateral patent processus vaginalis, no scar incision and less pain.

Scrotal abscess in newborns

[1]Rouzrokh M, [1]Khaleghnejad Tabari A, [2]Tavassoli A, [1]Mohajerzadeh L, [1]Mirshemirani AR

[1]Pediatric Surgery Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

[2]Department of Pediatric Neurology, Ali-Asghar Children's Hospital,

Tehran University of Medical Sciences, Tehran-Iran

Aims: Scrotal abscess (pyocele) is uncommon in the neonatal period it should be considered in the differential diagnosis of acute scrotal swelling in newborn. We report five cases with scrotal abscess.

Method & Material: From 2010 to 2013, 5 neonates with scrotal abscess were treated in Mofid Children's Hospital. All cases were presented with an irreducible mass, erythema, tenderness, edema, and pain .Scrotal Trans-illumination was negative. Sonographic findings in scrotal abscess include fine septations, a fluid echogenicity, thickening of the scrotal layers and testicular torsion should be considered. All patients were managed successfully with operative intervention.

Result: All cases were admitted in NICU ward and coverage by IV antibiotic .Scrotal abscess was bilateral in 4 cases. Two boys had idiopathic pyocele probably due to hematogenous spread of infection. One case after meconium peritonitis and other case subsequent of bacterial peritonitis secondary to intestinal perforation due to necrotizing entrocolitis presented scrotal abscess. The last case, scrotal abscess was seen after operation for jujenoileal atersia. All cases were explored and irrigation/drainage was done .In one case, testicular tissue was destroyed. Organisms in idiopathic cases of pyocele were Ecoli and Staphylococcus epidermidis. Bacteriologic cultures identified Klebsiella pneumoniae and E coli. Two cases die due to sepsis.

Conclusion: Scrotal abscess has been reported but is not well described in the pediatric population. Although nonoperative therapy with intravenous antibiotics were reported but we recommend early exploration not only for successfully management but also proper diagnose.

Is Fournier's gangrene always Fatal in Children?

[1]Rouzrokh M, [1]Khaleghnejad Tabari A, [2]Tavassoli A, [1]Mohajerzadeh L, [1]Mirshemirani AR

[1]Pediatric Surgery Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

[2]Department of Pediatric Neurology, Ali-Asghar Children's Hospital,

Tehran University of Medical Sciences, Tehran-Iran

Aims: Fournier's gangrene (FG) is a rapidly progressive necrotizing fasciitis of the perineum and external genital organs. The disease is considered uncommon in the pediatric age group. Here we present 5 cases of FG were referred to our center.

Method & Material: From 2011 to 2013, 5 cases with FG were treated in Mofid Children's Hospital. Case 1(6 months old male with extensive ulceration in left buttock) .Case 2 (8 years boy with post car accident wide perineal Laceration) Case 3(5 months male with perineal cellulitis and abscess after circumcision) .Case 4 (6 months female with Leukocyte Adhesive Disease admitted with genital abscess). Case 5 (6 yo boy with Acute Myeloid Leukemia and gluteal ulcer and fasciitis) Wide spectrum antibiotic started intravenously, and surgical debridement's was performed.

Results: Mean surgical debridement steps was 2 times (1 to 5). Colostomy was performed in 3 patients. Urinary diversion was performed in one patient. Wound dressing with 0.5% H2O2 and 1% citric acid solution under general anesthesia were done daily. Culture of the debris revealed the offending organisms to be Kellebsila, Streptococci, E-coli and pseudomonas. 3 cases are alive after primary and subsequence reconstructive treatment. 2 cases despite appropriated treatment were died due to sepsis and multi organ failure

Discussion: The management of FG includes aggressive resuscitation with I. V. fluid, blood and broad spectrum parenteral antibiotics. Early aggressive surgical debridement of necrotic tissues has important role for control spread of infection and induce reduction of systemic toxicity. When the source of infection is from the anorectal region or when urinary extravasations or peri-urethra inflammation is present, urinary or fecal diversion is indicated to reduce contamination and allow wound healing to take place. The diagnosis of FG does not always mean death for infants.

Transverse Testicular Ectopia

Rare anomaly of testicular ectopia and case presentation

Hadipour A

Non-Communicable Pediatric Diseases Research Center, Amir Kola Children's Hospital,

Babol University of Medical Sciences, Babol, Iran

TTE is a well described, rare congenital abnormality of testicular descending, in which both testes migrate through one inguinal canal.

Usually common in RT side the most type of presentation is unilateral UDT and empty scrotum and inguinal hernia in other site. Mean age of presentation is under 2 years.

Discovery of TTE is often intra operative during herniorrhaphy with inguinal hernia. Some other congenital anomaly such as UPJO, hypospadiasis and renal abnormality may see with TTE.

Trans-septal orchiopexy via contra lateral inguinal incision is treatment of choice.

We present 7 months old boy with RT inguinal hernia and LT side UDT that explored for RT herniorrhaphy + LT orchiopexy.

Normal LT testis revealed in RT canal exploration and after ligation of RT sac and release of LT testis, trans-septal orchiopexy performed in LT side.

Conclusion: patients presenting with concomitant inguinal hernia and contra lateral UDT should be considered for TTE.

Single working port and extracorporeal knotting in laparoscopic repair of hernia in children

[2]Saeeda M, [1]Khaleghnejad Tabari A, [1]Mirshemirani A

[1]Paediatric Surgery Research Center, Mofid Children's Hospital

Shaheed Beheshti University of Medical Sciences, Tehran, Iran

[2]Pediatric Ward, Milad General Hospital, Social Security Organization, Tehran, Iran

Purpose: The superiority of laparoscopic repair of inguinal hernia in children with less tissue handling and easy exploration of contra-lateral side is accepted by many pediatric surgeons. The objective of this study is to report our simplified technique of extracorporeal knotting with single working port in repair of inguinal hernia.

Patients and Methods: Eighty tow inguinal hernia repair done in 65 patients from April 2006 to May 2010.

Single 3mm working trocar at right pararectal line and purse string closure of internal ring by 3o Vicryl suture entering through small stab incision in either side and out the same incision and extracorporeal knotting is our simplified technique. Five mm telescope through umbilical trocar by open technique.

Results: Sixty five cases, 47 males and 17 females underwent operation by this technique. 82 hernia repairs, 38 in right, 10 in left and 17 bilateral, three cases of unilateral were recurrence of previous open repair. The mean age was 10 months (4 months to 6 years). The mean operative time was 20 minutes in unilateral, 34 minutes in bilateral. There was no operative complication and conversion. All patients were followed at least 6 months to one year. There were 3 recurrences one in girl and two in boys that repaired by open technique. The comesis of scar was excellent.

Conclusion: This modified single working port laparoscopic repair of hernia with extracorporeal knotting make the repair very simple with excellent cosmesis. The long term result should be evaluated with larger group and longer follow up.

Late Results of a New Surgical Procedure for the Treatment of Bladder Extrophy

Kheradpir MH
Children's Medical Center, Tehran University of Medical Sciences, Tehran, Iran

Abstract: The surgical treatment of bladder exstrophy presents a major problem, particularly in delayed admitted cases and those with a small bladder plate. In the last two decade there is increasing number of failed bladder exstrophy closure in neonate and infants which presents also another major problems group for surgical treatment. The ideal options the dismembered detubularized rectosigmoid bladder with end-to-side colorectal anastomosis was used by author before 36 years, as a continent rectal bladder reservoir with low pressure. The disadvantage of this operative technique was modified by author by colon pull-through inside the reservoir with complete separation of urine and stool. This operative technique is not indicated in children with weak anal tone and construction. It should be carried out in patients with a perfectly functional anal sphincter. The operation is performed in 3 stages, usually when the child is older than 3 years.

Without stoma, appliance or catheterization this type of continent urinary diversion is without stoma, appliance or catheterization this type of continent urinary diversion is especially suitable for children and it is a good and safe alternative to other continent urinary diversion.

Closure of Open Pelvic Ring Is Critical In Successful Treatment of Classic Bladder Exstrophy

Mollaeian M, Panjavi B, Mehrabi V, Mollaeian A

Department of Paediatric Surgery, Bahrami Children's Hospital,

Tehran University of Medical Science, Tehran, Iran

Pelvic osteotomy performed at the time of initial closure confers several advantages including, (1) easy approximation of the symphysis with diminished tension on the abdominal wall closure, and elimination of the need for facial flaps. (2) placement of the posterior vesico-urethral unit deep within the pelvic ring, enhancing bladder outlet resistance, and (3) bringing the large pelvic floor muscles near the midline where they can support the bladder neck and aid in eventual urinary control.

If the patient is younger than 72 hours old and examination under anesthesia reveals that the pubic bones are malleable and able to be brought together easily in the midline by medial rotation of the greater trochanters, the patient can undergo closure without osteotomy.

Various cases will be presented in the paper.

دکتر فتح اله روشن ضمیر، دکتر علیرضا میرشمیرانی، دکتر احمد خالق نژاد طبری،دکتر هوشنگ پورنگ، دکتر ناصر صادقیان، دکتر محسن روزرخ، دکتر شاداب صالح پور

Penile Agenesis: Report on 9 Cases and Review of Literature

Roshanzamir F, Mirshemirani A, Khaleghnejad Tabari A, Pourang H, Sadeghian N, Rouzrokh M, Salehpour SH

Department of Pediatric Surgery, Shaheed Beheshti University of Medical Sciences

Background: Penile agenesis (PA) is an extremely rare anomaly with profound urological and psychological consequences. The opening of the urethra could be either over the pubis or at any point on perineum or most frequently in anterior wall of the rectum. The aim of treatment is an early female gender assignment and feminizing reconstruction of the perineum. Case(s) **Presentation:** We report 9 cases of penile agenesis with urination and defecation through the rectum, apparently normal scrotum, bilateral descended testis, normally located anus, urethral opening in anus, 46xy karyotype and associated anomalies In 2 cases parents refused any surgical interventions, but in 7 cases we did perform different operations (transforming six cases to females and one case to male gender).

Conclusion: We recommend feminizing operations in newborns or infants, but in older patients, regarding the child's psychology, it is advised to perform masculinizing operations, and finally, no surgical intervention should be undertaken before counseling the parents.

دکتر مهران هیرادفر، دکتر مرجان جودی، دکتر پریسا سعیدی، دکتر احمد بذر افشان، دکتر رضا شجاعیان،
دکتر رضا نظرزاده

The Long Term Outcome of Feminizing Genital Surgery: A new scoring system

Hiradfar M, Joudi M, Saeedi P, Bazrafshan A, Shojaeian R, Nazarzadeh R

Sheikh Children's Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background: Intersex is a congenital anomaly that needs a team working management. Virilizing congenital adrenal hyperplasia is the most common cause of female pseudohermaphroditism. The primary goals of feminizing genital reconstruction are to create a normal-looking, sensate clitoris, an adequately sized and appropriately situated vagina, and normal-appearing female external genitalia. Complications such as stenosis or poor cosmetic and functional results may cause serious psychological insults in this study we have evaluated the results of feminizing genital reconstruction according to our scoring system in female pseudohermaphroditism patients.

Method and Materials: This is a study of 31 female pseudohermaphroditism cases that underwent early surgical genitalia reconstruction in Sarvar pediatric hospital. Our long term outcome Scoring system is assessed both anatomical and functional aspects, including the size and appearance of clitoris, labia major, minor and vagina and also the urinary tract by ultrasonography and uroflowmetery. Finally the outcome was rated as perfect, acceptable and poor results.

Results: Mean age at the time of surgery was 2.15±1.93 years. Prognosis of surgery according to our scoring was perfect in 38.2%, acceptable in 26.5% and poor in 14.7%.

The most common complications were vaginal stenosis (56.8%), clitoromegaly or atrophia of clitoris or lack of sensation (11.5%) and urinary tract abnormalities in (10.6%).

Conclusion: according to perfect and acceptable results in most of patients, we suggest early surgical intervention in intersex patients to determine the patient sexual identity. Long term fallow up is necessary and we suggest our scoring system for quantitative judgment about the outcome of surgical reconstruction.

Vaginal reconstruction in patients with vaginal agenesis (case report)

Nazem M

Alzahra Hospital, Medical University of Medical Sciences

Background : Vaginal agenesis is an uncommon, but not rare condition, given an incidence ranging from 1 per 4,000 to 1 per 10,000 females. Pediatric surgeons are more likely to use bowel segments for the creation of a neovagina. According to our case, also we could use bladder for reconstruction of vagina.

Methods: A 3 months old female with ambiguous genitalia referred to ALZAHRA hospital, Isfahan, Iran. Her karyotype was 46XX.When she was 7 months old, cystoscopy was done under general anesthesia, vagina was not found. Therefore, laparoscopy was performed. On exploration, Uterus, both ovaries and Fallopian tube were normal. Surprisingly, uterus has adhesion to the dome of bladder. Bladder seems too big for this age.

We decided to laparotomy, hystrostomy was done, probe was passed through cervix. It seems it was in the bladder. So the anterior wall of the bladder was opened. We found that the cervix has been opened into the bladder. A 3*5 cm flap from posterior wall of bladder along anterior septum of the uterus cervix, with preservation of ovarian vessels was taken. Neovagina was reconstructed with 5/0 vicryl. This tube (neovagina) bring out from posterior of bladder and anastomosed with 4/0 vicryl to skin. On second day after operation, the color of nevagina mucosa (bladder mucosa) became ischemic color, but gradually changed to normal color, and patient discharged after 10 days.

Results: Different techniques for vaginal construction in patients with vaginal agenesis have been used including the construction of a skin neovagina and the creation of an intestinal neovagina using sigmoid, cecum, and small intestine. Our •preferred technique for vaginal replacement is the use of a 3 × 6 cm of posterior bladder based on the ovarian artery .

Conclusions: The medical and surgical management of DSD should be undertaken by a multidisciplinary specialized team. The treatment plan must be thoroughly discussed with parents, with the goal of giving the child, thereafter, the most satisfactory quality of life possible. However, long-term studies are necessary to assess the functional and sensory outcomes of newer surgical techniques .

Penile Agenesis (Aphallia) with imperforated anus: A Case Report

Amouee A

Department of General Surgery, Ali ebn abitaleb Hospital,
Rafsanjan University of Medical Sciences, Rafsanjan, Iran

Background : Penile agenesis (PA) is an extremely rare anomaly with profound urological and

Psychological consequences, the opening of the urethra could be either over the pubis or at any

Point on perineum or most frequently in anterior wall of the rectum. The aim of treatment is an early female gender assignment and feminizing reconstruction of the perineum.

Case Presentation: We present a 2 day preterm old infant referred to us due to absence of penis and imperforate anus, The child looked normally developed and examination of the heart, lungs, abdomen, head and neck were all normal abdominal distension, vomiting and no defecation and urination from perineal fistula, the scrotum was normal with two normally descended testes with palpable vas deferens. Renal ultrasonographies and chest x-ray were normal and chromosomal studies revealed a normal karyotype 46XY

Treatment: high sigmoid colostomy immediately and vesicostomy due to elevated BUN, Crat. At 4th day of life

Conclusion: Most of the surgeons prefer feminizing operations in newborns or infants, but in older patients, regarding the child's psychology, it is advised to perform masculinizing operations and finally, no surgical intervention should be undertaken before counseling the parents. However, despite of the practical problems of reconstructing a normally functioning penis, one of the options is rearing such children as males because the social stigma for females in our society may be much greater. Unmarried male can be far better in life than an unmarried female.

دکتر شمس الدین مهاجرزاده، دکتر عبدالاحد، دکتر لیلی مهاجرزاده، دکتر احمد خالق نژاد طبری،دکتر محسن روزرخ، دکتر شمسیان

WILMS' TUMOR DETECTION BY CARBON NANOTUBE BASED BIO ELECTROMECHANICAL SENSOR

[2]Mohajerzadeh SH, [2]Abdolahad M, [1]Mohajerzadeh L, [1]Khaleghnejad Tabari A, [1]Rouzrokh M, [3]Shamsian S

[1]Pediatric Surgery Research Center, Mofid Children's Hospital, ShaheedBeheshti University of Medical Sciences, Tehran, Iran

[2]Thin Film and Nano-Electronic Lab, School of Electrical and Computer Eng, University of Tehran,Tehran, Iran

[3] Pediatric Hematologic Research Center, Mofid Children'sHospital,ShaheedBeheshti University of Medical Sciences,Tehran,Iran

Aim of the study: The deformability properties of human renal cells tissue are used to, distinguish their cancerous transformation. We have investigated the entrapment of healthy kidney cells, and Wilms' tumor, on arrays of multiwall carbon nanotubes biosensor, based on their deformability properties and in particular, their elasticity.

Materials and Methods: The carbon nanotube arrays, have been grown by direct current plasma enhanced chemical vapor deposition (DC-PECVD) system on a lithographically patterend Nikle catalyst layer. The main precursor gas and the growth temperature were acetylene (C_2H_2) and650oCrespectively.In addition the cancerous and healthy cells were prepared from benign and tumoral parts of the kidney of a known case of Willms removed by surgery. The cells then were separated from the tissue; as single individual cells by some chemical and ultrasonic procedures. Finally the separated cells were flown on the surface of CNT biosensor. The detection of entrapped cancer cells, were experimented by optical microscopy, scanning electron microscopy and electrical signal extraction from entrapped cells.

Results: The observed results where the high entrapment fraction of cancer cells meanwhile, a rare fraction of healthy renal cells, were entrapped on CNT arrays. We believe the observed effects are due to the more deformability and softness of malignant cells in comparison with the normal ones, both for live and fixed cells. The measured stiffness of the cells by AFM indentation methods confirms their difference in rigidity. Also the electrical signal extracted from cells by CNT conductive nanoelectrodes confirms the observable entrapment of cancer cells, on CNT arrays.

Conclusion: The present phenomenon describes a new application of vertically aligned carbon nanotubes to distinguish, the healthy and cancerous cells by means of their different deformability properties during entrapment, on these arrays.

دکتر فرید اسکندری، دکتر هوشنگ پورنگ، دکتر منصور ملائیان، دکتر محمد اسماعیل دارابی، دکتر میترا آذرشاهین، دکتر ابراهیم اسپهبدی

Nephron Sparing Surgery in Bilateral Wilms' Tumor – A Case Report

[1]Eskandari F, [1]Pourang H, [1]Mollaeian M, [2]Esmaeel Darabi M, [2]Azarshahin M, [2]Espahbodi E

[1]Department of Paediatric Surgery, Bahrami Children's Hospital,

Tehran University of Medical Science, Tehran, Iran

[2]Department of Paediatric Anesthesiology, Bahrami Children's Hospital,

Tehran University of Medical Science, Tehran, Iran

BACKGROUND: Management of a child with bilateral Wilms' tumor (BWT) is very challenging, and bilateral nephroblastoma of the renal hilus represents a significant surgical challenge too. Preserving the maximum amount of renal parenchyma is necessary to prevent renal failure, but complete resection is required to optimize the chance of treatment of the malignancy. Nephron sparing surgery is a standard procedure for children with solitary or bilateral Wilms' tumor.

CASE PRESENTATION: This patient was a 3 years old girl, who was suffering from dysuria and frequency. A 60mm hypoeqoeic solid mass with central necrosis in the upper pole of right kidney and one 20mm mass in left kidney hilus were seen on abdominal sonograghy and CTS. According to COG, abdominal surgery was performed after chemotherapy without doing biopsy. During laparotomy a solid tumor about 30*30mm in the upper pole of the right kidney and a 5*8mm solid tumor without invasion to the vessels of the left kidney hilus was present. Partial right nephrectomy and left tumoral enucleation were done. Follow up continued for one year. Both kidneys were functional and there was no evidence of tumor recurrence in serial imagings.

دکتر ناصر صادقیان، دکتر میرمحمود سید احدی، دکتر احمد خالق نژاد طبری، دکتر علیرضا میرشمیرانی،
دکتر امید امان اللهی

Wilms' Tumor: A 10 Year Retrospective Study of Mofid Children Hospital

Sadeghian N(MD), Seyed Ahadi MM(MD), Khaleghnejad Tabari A(MD),
Mirshemirani A(MD), Amanollahi O(MD)

Pediatric Surgery Research Center, Shaheed Beheshti University of Medical Sciences,
Tehran, Iran

Background: Wilms' tumor (nephroblastoma) is the most common renal malignancy of Childhood. The aim of the study was to evaluate the characteristics of Wilms' tumor and the results of combined modality treatment obtained in our center in Tehran.

Methods: Fifty-five patients diagnosed as having Wilms' tumor were studied in the period Between February 1992 and March 2002. Demographic features, mode of presentation, associated anomalies, the stage of tumor, histopathologic results, and the survival rates were evaluated.

Results: Of these 55 patients, 31 were males and 24 were females (M/F = 1.2). The mean age at The time of diagnosis was 45.2 months. The distribution of 54 operated patients according to the surgical stage was: stage I 32.7%, stage II 16.36%, stage III 38.1%, stage IV 9%, and stage V 1.8% (one patient (1.8%) has not been operated). Favorable histology was diagnosed in 54.5% and unfavorable histology in 43.6% of the patients. The patients were treated according to National Wilms' Tumor Study protocols. The relapse-free and overall 4 years survival rates were 71% and 86%, respectively.

Conclusion: As a developing country, with similar relapse free and overall survival rates to National Wilms' Tumor Study, our institution showed an improvement in the treatment of patients with Wilms' tumor in recent 10 years, but with more adaptation to the National Wilms' Tumor Study treatment protocols better optimum results seem to be achievable.

دکتر مهران هیرادفر، دکتر مرجان جودی، دکتر پریسا سعیدی، دکتر احمد بذر افشان، دکتر رضا شجاعیان، دکتر رضا نظرزاده

Pediatric clear cell sarcoma of the kidney with atriocaval thrombus

Conventional approach needs a serious revision

Hiradfar M, Joudi M, Saeedi P, Bazrafshan A, Shojaeian R, Nazarzadeh R

Sheikh Children's Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Background: Clear cell sarcoma of the kidney (CCSK) is a rare pediatric renal tumor representing almost 3% of childhood malignant renal neoplasm. Atriocaval extension of tumor is even more unusual. According to few cases, therapeutic approach is mostly impressed by experiences in Wilms' tumor but reviewing of reported cases and our patient show a completely distinct entity and behavior for CCSK in children.

Patient and method: A six year old girl presented with a right sided abdominal mass. CT scan revealed a renal tumor with vascular involvement extending to the right atrium. Echocardiography confirmed tumor thrombus as a floating process in IVC up to the right atrium. Fine needle biopsy suggested clear cell sarcoma so neoadjuant chemotherapy was initiated but minimal effect was observed so surgical exploration was planned under cardiopulmonary bypass. Intra atrial extension of tumor was firm and fixed to the renal mass. Right radical nephrectomy was performed and intracaval part was easily excised with the tumor via a limited venotomy. Patient is tumor free in 18 months fallow up.

Results: Reviewing few cases of CCSK with atriocaval involvment showed that tumor thrombus regression cannot achieved successfully by pre-operative chemotherapy, as the intravascular part of CCSK is firm and fixed, tumor embolus is unlikely so invasive approach with sternotomy and cardiopulmonary bypass is not reasonable. CCSK tumor thrombus could be removed en bloc with renal mass via a limited venotomy.

Conclusion: CCKS with intravascular involvement has completely different characteristics from Wilms' tumor so conventional approaches that mostly come from Wilms' studies must revise seriously.

Renal Fusion and Ectopia

Osia S

Non communicable pediatric disease research center,

Babol University of Medical Sciences, Babol, Iran

Background : The embryology of congenital anomalies of the kidney involves two protagonists and three events.

This event occurs during first & weeks of gestation .

The ectopic kidney derives from an error of ascent. Most are pelvic kidneys that fail to ascend out of pelvic cavity. Ectopic kidney can be unilateral or bilateral .

Crossed renal ectopia refers to ectopic kidney displacing to opposite side and the ectopic kidney is usually hypo plastic. The majority of these are fused but there are some reports of cases without fusion.

Ectopic kidneys may be asymptomatic and incidentally found, but complications like urethral obstruction, reflux, infection and calculi can occur.

Case report: We introduce a 6 years old girl with chief complain of recurrent urinary tract infection. After admission and evaluation, ultrasonography result showed an ectopic kidney in left pelvic .the result of radionuclide cystography showed grade II vesicoureteral reflux (VUR) accompanied with hypoplasia of Lt Kidney.

Conclusions: It is very important that ectopic kidneys can associate with other abnormalities and we must be aware and fallow them till role out .some of them like VUR can missed and led to lots of complication like renal scare but if diagnosed on time Complications can prevented by surgical correction (in high grade cases) or antimicrobial agent prophylaxes .

Bilateral Wilms' tumor, Shiraz experience

Foroutan HR

Laparoscopy Research Center, Shiraz University of Medical Sciences

Bilateral Wilms' tumors are not very common. Approaching these patients is controversial. Here we present our experience with 5 patients with bilateral Wilms' tumor in Pediatric Surgery Ward, Nemazi Hospital, Shiraz University.

Methods and materials: We reviewed the charts of the patients with Wilms' tumor; five of them had bilateral tumors. Age, sex, diagnostic procedures, size, stage, surgical and medical approach histology and prognosis were studied.

Results: there were three female and two male. One patient had contralateral recurrence, seven years after right nephrectomy. Other 4 patients had synchronous Tumors.

Most of the patients underwent chemotherapy before surgical approach. Total nephrectomy was performed for 4 patients and one patient underwent bilateral partial nephrectomy

Conclusion: we recommend chemotherapy before surgical approach and bilateral partial nephrectomy when feasible.

Management protocols of Wilms' tumor: NWTS vs SIOP

Badebarin D, Aslanabadi S, Jamshidi M

Tabriz Department of Pediatric Surgery, Tabriz University of Medical Sciences, Iran

Wilms' tumor (nephroblastoma) is the most common malignant tumors of the kidney in children. The treatment of Wilms' tumor can be considered as the paradigm for multimodal treatment of malignant solid tumors in childhood. With the availability of several protocols in the management of Wilms' tumor, there is dilemma in the minds of the treating oncologists or pediatric onco-surgeons as to whether the child should receive upfront chemotherapy or should be operated upon primarily. It is necessary for us to understand why do we follow either of the protocols, National Wilms' Tumor Study (NWTS) which follows the upfront surgery principle or the Societe Internationale D'oncologie Pediatrique (SIOP) which follows the upfront chemotherapy principle in all stages of the disease. While deciding which protocol to follow, it is imperative to know the pros and cons of the treatment strategies and also to study the outcome patterns in both the treatment regimes.

In an attempt to compare all the differences in both the major protocols, it was realized that most of our patients in the Iran scenario present with advanced disease and thus poorer outcomes if intensive and appropriate treatment strategies are not utilized.

Associated Urologic Anomalies in Patients with Anorectal Malformations

Haidar Muhssein
Kufa University, College of Medicine, Najaf, Iraq

Background: Patients with anorectal Malformations are frequently associated with urologic anomalies of varying complexity. Some of them need surgical correction and others need only pharmacologic therapy and follow up.

Methods: Data of 29 patients (13 males and 16 females) born with anorectal malformations in the period between September 2010- November 2012 were reviewed retrospectively. Ultrasound examination was done for all patients and if abnormality encountered, further investigations then done. All patients were referred to a pediatric urologist for treatment and follow up.

Results: The incidence of associated urologic anomalies was 9.6%.Absence of one kidney was most commonly encountered .This incidence may not reflect the actual coexistence of urologic anomalies in patients with anorectal malformations due to the limited number of the patients and the lack of patients with severe malformations like cloaca.

Conclusion: Urologic anomalies are more common in patients with high malformation. Ultrasonography should be done for all patients with anorectal malformations as a first non invasive screening test but more invasive investigations like cysto-urethrography should be spared for patients with abnormal ultrasound like dilated pelvi- calyceal system.

دکتر محمد حسن کریمی نژاد

Suitable Sex assignment of ambiguous newborns is the most challenging decision in neonatology

Kariminejad MH

Although sex assignment in the normal newborn is easy and simple, it is time consuming and the most challenging decision on an ambiguous child. It is team work and the following items should be delineated:

* Anatomy and function of the external and internal genitalia
* Chromosomal structure (Karyotype)
* Hormonal assays
* Molecular analysis of SRY factors in case

When the child is older, 4 other main factors should be considered:

Gender identity: private sense of being man/woman,

Stable gender identity: concordance between sociology and phenotype,

Gender role: a set of social and behavioral norms,

Gender orientation: the way of sexually attraction

Although sex constitution is identified during fertilization of spermatozoa carrying X or Y chromosome, its differentiation depends on the testicular secretion; Alfred Just demonstrated that in the absence of testicular function, the genital organs in all embryos differentiate toward female gender. Although this differentiation is a continuous phenomenon, it could be divided to four major phases. Gonads differentiation, development of Mullerian or Wolf ducts, differentiation of external genitalia, development of genital organs, and secondary sex characteristics. Failure of any phase leads to ambiguous genitalia, which was classified by Kelebs (1876) as **True or Pseudo Hermaphrodites**. In 2005, this classification was substituted as **Disorders of Sex Development (DSD).**

See the table:

Classical Terminology	Proposed Modern Terminology
Intersex	Disorders of Sex Development
True Hermaphrodite XX Female/ XX Male sex reversal XY Male or XX/ XY Chimeric	Ovotesticular DSD
Male Pseudohermaphrodite	46,XY DSD Undervirilization of XY Male Undermasculinization of XY Male
Female Pseudohermaphrodite (46,XX)	46,XX DSD Over Virilization or Hirsutism/ Both in female 46,XX

Although there is no reliable practical classification, the proposed modern terminology may be helpful for patient management.

Some related cases are presented.

Contralateral Exploration in Children with Unilateral Inguinal Hernia (study N.1 & N.2)

Davari H.A

Department of Pediatric Surgery, Isfahan University of Medical Sciences Isfahan, Iran

(Study N.1)

Purpose: The goal of this study was to determine the relative frequency of bilateral inguinal hernia in children referred with unilateral inguinal hernia, according to their age, sex and side of involvement.

Methods: It was a cross - sectional analytic and descriptive study of 400 patients under 6 years of age with unilateral inguinal hernia who were operated from April 2003 to October 2005. All patients were fallowed until April 2012 for contra lateral hernia.

Results: There were 31 female and 369 male patients. Totally 15.3% of the patients gut contra lateral hernia, 22.6% of girls and 14.6% of boys (P<0.173).

29% of the patients were less than one year old and 23.5% of them gut contra lateral hernia vs.11.6% of patients between 1-6 years old(P=0.017). Right sided hernia was present in 68.3% of patients and 13.9% of them vs. 18.1% of the patients with left sided hernia gut contra lateral hernia (P=0.278).

Conclusion: There was a significant relationship between sexes and development of contra lateral hernia but there was not significant relationship with age and the side of involvement and development of contra lateral hernia. Therefore contra lateral exploration is recommended in patients under the age one and especially in girl patients.

(Study N.2)

Purpose: The goal of this study was to determine the relative frequency of bilateral inguinal hernia in children referred with unilateral inguinal hernia, according to their age and sex.

Methods: It was a cross - sectional analytic and descriptive study of 336 patients under 3 years of age who were operated from April 2010 to October 2011. Routine countralateral exploration was performed in all patients.

Results: There were 99 female and 237 male patients. 65% of girls and 36% of boys were less than one years old. Right sided hernia was present in 57% of patients. countralateral exploration showed that 76% of girls and 62% of boys had countralateral patient processus vaginalis . 77% of the patients under the age of one and 57% of patients between 1-3 years old had positive exploration (P=0.005).

Conclusion: There was a significant relationship between sex, age and development of countralateral hernia but not with the side of involvement.

Therefore countralateral exploration is recommended in patients under the age one and in girl patients.

MALCIRCUMCISION, WHAT'S OUR DUTY?

Mousavi A

Department of Pediatric Surgery, Faculty of Medicine,

Mazandaran University of Medical Sciences, Sari, Iran

BACKGROUND:

Male circumcision is one of the most commonly performed procedures worldwide. It has an estimated complication rate ranging from 0.1% to 35%. Amputation of the shaft is one of the most devastating complications reported. The estimated complications after newborn circumcision covers only the immediate postoperative period prior to the infant's discharge from the hospital. The rate of subsequent repeat surgery to correct of late complications is unknown.

METHODS:

This was a prospective study of penile injuries resulting from circumcision managed in our unit.

Information on their demographic data, their age at circumcision, where and who circumcised them was obtained from their mothers. They were clinically examined for the presence and type of complications of circumcision.

RESULTS:

We have managed many boys due tomalcircumcision and late complications. Of those who sustained these complications,redundant foreskin, excessive loss of foreskin and buried penis were more. We had two patients withsustained amputation of the glans penis. On the other hand we had to do reoperation for 10 boys with hypospadias who had circumcised.Electrocautery-inducedUrethrocutaneous fistulae and Plastibell Ring injury of glans were other complications.If too much skin is taken, the skin of the scrotum is pulled up the shaft of the penis, making it appear shorter and penoscrotal webbing.

CONCLUSIONS:

Regrettably, it seems that the majority of those performing surgical procedures on the penis of minors take no interest in following up the outcome after the organ has developed.

We have a very high rate of complications of circumcision. Unfortunately, most of neonatal circumcisions are performed by inexpert physicians. We suggest that training workshops should be organized to adequately retrain all practitioners of circumcision on the safe methods available.

دکتر فرید اسکندری، دکتر هوشنگ پورنگ، دکتر منصور ملائیان، دکتر محمد اسماعیل دارابی، دکتر میترا آذرشاهین،
دکتر ابراهیم اسپهبدی

McKusick-Kaufman Syndrome - A Case Reporte

[1]Eskandari F, [1]Pourang H, [1]Mollaeian M, [2]Esmaeel Darabi M, [2]Azarshahin M, [2]Espahbodi E

[1]Department of Paediatric Surgery, Bahrami Children's Hospital,

Tehran University of Medical Science, Tehran, Iran

[2]Department of Paediatric Anesthesiology, Bahrami Children's Hospital,

Tehran University of Medical Science, Tehran, Iran

Background: Hydrometrocolpos is dilatation of the uterus and vagina due to obstruction of vaginal outlet and accumulation of fluid. The obstruction can be produced by imperforate hymen, transverse vaginal septum, or vaginal atresia. The accumulated fluid is secreted by the endometrial and endocervical glands as a result of estrogenic stimulation. Thus, hydrometrocolpos appears either early in infancy or at puberty when circulating maternal estrogens or endogenously secreted hormones are present.

The association of hydrometrocolpos and polydactyly in children with vaginal atresia or imperforate hymen has previously considered this abnormality as a homozygote expression of a rare autosomal recessive gene.

Case Presentation: A neonate girl, born on 39-week of gestation and weight of 3.2 kg, was immediately transferred to our hospital because of a large lower abdominal mass and polydactyly of both feet. Sonography of abdomen showed displacement of both kidneys and mildly dilated ureters. There were also two masses about 85*70*60mm and 30*40*25mm in the center and lower abdomen. Operation was performed on the fifth day of admission and a huge hydrometrocolpos was found and drained. Distal vagina was atretic and attached to the posterior wall of vesical neck. A drain was left in vagina through abdominal wall. Vaginoplasty was performed after 2 months.

Treatment of disorders of sex development and presentation of 84 cases

Delshad S, Razaghi azar

Aliasghar Children's Hospital, Iran University of Medical Sciences

Purpose :

Many factors such as chromosomes, gonads, hormones and enzymes influence the development and differentiation of embryo external-genitalia. A defect in any of these factors can result in the development of child with genital ambiguity. Physical and emotional complications related to genital ambiguity may be prevented by appropriate assessment and surgical planning. This study investigated methods to treat patients with genital ambiguity and compared results of two-stage surgery versus one in patients with female pseudohermaphroditism condition related to congenital adrenal hyperplasia.

Methods :

This retrospective study included 85 patients who underwent genital reconstructive surgery at Ali Asghar Children's Hospital, Tehran Children's Hospital between 1998 and 2012. 68 patients had female pseudohermaphroditism with adrenal hyperplasia origin and 17 patients had other types of intersex disorders. Patients in one-stage surgery group received genital reconstructive surgery when they were 3 to 6 months old and for patients in two- stage surgery group, the second procedure was performed when the patient was between 5 and 6 years old. 66 patients with female pseudohermaphrodism underwent clitoroplasty, labioplasty and vaginoplasty to change their masculine external genitalia appearance from masculine to feminine form. In one stage-group, these procedures were completed concurrently while in two stage type, clitoroplasty and labioplasty was carried out when the patient was 3 and 6 months old and vaginoplasty was performed when the patient was between 5 and 6 years old .

Results:

Of 68 cases of female pseudohermaphroditism with the adrenal gland hyperplasia 36 cases underwent one stage-surgery. The remaining 30 cases had two-stage surgery in which clitoroplasty and labioplasty was carried when the patient was 3 and 6 months old and vaginoplasty was delayed until the patient was between 5 to 6 years old. Vaginal opening stenosis as the most common post-surgical complication was not observed in 41.7% of one-stage surgery group and 85% of two-stage type. This difference between one stage-surgery group and two stage type is statistically significant (p=0.047 (

Conclusion:

In comparison to one-stage surgery, vaginal opening stenosis was observed statistically less in two-stage surgery and therefore two-stage surgery can be a better approach to treat patients with genital ambiguity in Female pseudohermaphroditism type. Key Words: Genital ambiguity, intersex condition, adrenal hyperplasia, vaginoplasty, clitoroplasty.

Urinary Tract Infection Management in Neonatal Intensive Care Unit (NICU)

Tajalli S
Neonatal Intensive Care Master Student
Shahid Beheshti University of Medical Science, Tehran, Iran

Background :**NICU** is a sensitive part in hospital and infection control is often difficult. Nosocomial infection is a localized or systemic process that results from adverse reaction to the presence of an infectious agent(s) or its toxin(s) that was not present or incubating at the time of admission to the hospital.

Result: NICU may also be a source of infection for other infants. The most common infections of the newborn blood infection is(45.6%), surgical site infection (31.1%), urinary tract infection (18.9%) and respiratory tract infections (14.4%) respectively. 1 percent of urinary tract infections in newborns was happening. The incidence of infection is much higher in low birth weight infants and three times more common in males than in females. Infants with congenital anomalies of the kidney ureter bladder Vmbtlayan to Rfla who have a higher percentage of urinary tract infection

The most common organisms are effective in urinary infections are: Escherichia coli (E.coli), Klebsiella, Proteus, and Staphylococcus. Birth and perform invasive procedures such as the use of urinary catheters has an important role in the incidence of urinary tract infection.

Conclusion: NICU infections increase mortality and prolong hospital stay and hospital costs infants'. The increased survival of low birth weight in recent decades is due to increasing infections. National UTI is considered a major problem and we must avoid by control nowadays carefully and making necessary and appropriate measures planning.

Results and complications of children with ESRD undergoing peritoneal dialysis catheter placement 1997-2013 in Aliasghar Pediatric Hospital

Jahangiri F, Hooman N

Pediatric Surgery Department, Aliasghar Pediatric Hospital, Iran University of Medical Sciences, Tehran, Iran

Introduction &Purpose: Peritoneal dialysis (PD) is the preferred long-term dialysis modality in the pediatric population. The aim of this study was to analyze results of (PD) catheter placement in our center.

Material & Method: Between "1997 - 2013" the record files of all patients with ESRD undergoing (PD) catheter placement were evaluated. The demographic data, surgical complications, underlying disease, frequency of catheter change, out flow failure & survival were evaluated.

Results: 48 patients with a mean age of 44months (min 9 days; max 16years) underwent PD insertion. 28(59%) patients were male and 20(41%) were female. The most common underlying diseases were reflux nephropathy and cystic kidney disease (n=23). 61 catheter implanted surgically in 48 patients. PD catheter inserted laparoscopically in five cases. Reoperation for malfunction or infection was required in 44% of patients with a median PD catheter survival of 12.4 months. Reoperation for hernias (inguinal, umbilical, incisional) occurred in 15(43%) patients. From48 patients, 19 cases were under CAPD, 8 patients had kidney transplantation, and 8 died. Lost to follow up was in 13 patients.

Conclusions: In this study catheter removal rate was relatively high due to peritonitis and malfunction. And many patients need another operation for hernia repair. It seems Laparoscopic insertion of a peritoneal dialysis catheter allows accurate placement of the catheter under direct vision and during this procedure we can also evaluate the patent processus vaginalis and umbilical defect so we can prevent from further hernias repair. Further clinical trial studies for confirmation are recommended.

دکتر سید جواد نصیری، دکتر مجتبی موسوی خوشدل، دکتر صلا ح الدین دلشاد، دکتر پیروز فرهود، دکتر فریبا جهانگیری،

Early insertion of trans-prineal port during laparoscopic anorectoplasty: A new concept

Nasiri J, Mousavi Khoshdel A, Delshad S, Farhoud P, Jahangiri F

Department of Pediatric Surgery, Ali Asghar Children's Hospital,

Tehran University of Medical Sciences

ABSTRACT:

Laparoscopic operation in pediatric surgery is in progress in every field .Laparoscopic anorectoplasty needs high level of skill for laparoscopic suturing and nothing. We operated on 1 case of imperforate anus and 2 cases of cloac anomaly in our center .we inserted prineal port for rectal pull through in early stage of operation before cutting of fistula. This port then was used for insertion of one 10 mm clip applier that used for clipping of fistula instead of suturing of it. In this manner, surgery was simplified and time of operation was reduced.

The comparative study of the outcomes of early and late oral feeding in intestinal anastomosis surgeries in children

Amanollahi O,

Department of Pediatric Surgery, Kermanshah University of Medical Sciences, Kermanshah, Iran

Background: A leakage of intestinal anastomosis is typically regarded as a devastating post-operative complication. Traditionally it's believed that long fasting after intestinal surgery protect anastomosis site and most surgeons applied this method. Post-operative long fasting has many physical and mental adverse effects, especially in children, but its benefit has not proven yet. The current study aimed to compare the outcomes of early and late oral feeding in intestinal Resection and anastomosis surgery in children.

Methods: This is a double-blind controlled trial study. A total of 67 children aged 1 month to 12 years who underwent intestinal resection and anastomosis were randomly assigned into two groups: early-feeding and late-feeding.

In early feeding group, the patients were given water and oral dextrose water 24 hours after the operation and were received milk and other oral liquids 48 hours after the surgery. In the late feeding group, all patients were kept fasting for 5 days after the surgery and Total parenteral nutrition (TPN) was started in second postoperative day and oral feeding was started 5 days after the operation. If liquid diet tolerated then soft and regular diet given gradually all patients were monitored during post-operative days in the hospital stay, every 12 hours for signs and symptoms like, fever, nausea and vomiting, abdominal distension. First passage of gas and stool, evaluated also. The hospital stay time, major post-operative complications like anastomosis leakage, wound infection or dehiscence, intra abdominal abscess was analyzed in the patients of two groups.

Results: The mean time of first oral feeding in the early feeding group was 2.5±0.7 days but it was 5.3±0.6 days in the late feeding group. There was no mortality in both groups. There was no difference in major complications in both groups (anastomosis leakage). In early feeding group, first defecation time was shorter than late feeding group (3.7 days vs. 4.4 days) and they had less hospital stay also (5.2 days vs.8.3 days) and lower cost of hospitalization compared to the late oral feeding group.

Conclusion: The results of our study showed that the early oral feeding after intestinal resection and anastomosis in children is a safe method, it has many benefits and doesn't increase the major or minor post-operative complications (anastomosis leakage ...) long time fasting is not necessary and hasn't any beneficial effect and early feeding increases satisfaction of the parents and children, and reduce hospital stay and costs.

Abdominal teratoma in a non palpable undescended testes: Case Report

Farhood P, Ghavami Adel M, Farhood P

Department of Pediatric Surgery, Tehran University of Medical Science, Tehran, Iran

Cryptorchidism at birth is common and has been reported to occur in as many as 3.4% of full-term male newborns. The association of malignant tumors with undescended testes is reported to be 5 to 48 times more common than in the scrotal testis. Testicular tumors are most frequently associated with intraabdominal undescended testes.

Pediatric testicular neoplasms are rare, accounting for only 1% of all pediatric solid tumors, with an annual incidence of 0.5–2 per 100,000 prepubertal males. Little is known, however, about the pathologic condition and the cause of intraabdominal testicular (IAT) tumors in children.
Primary testicular tumors may be grouped into either germ cell or non-germ cell tumors, testicular teratomas being a subset of the former. These neoplasms can affect children of any age, but are more commonly diagnosed in the postpubertal population. It seems that that before the testis descending through the inguinal ring during the seventh month of gestation, fetal testicular teratomas develop in a similar manner as retroperitoneal teratomas. Therefore, the germ cell theory may also explain the tumorigenesis of IAT tumors.
Here we explain a 12 years old boy that was explored for left non palpable testis. We found a solid mass and histopathology revealed mature tratoma. Postoperative follow up for hCG and aFP was normal. And two years after excision of his tumor no recurrence is found.

urogenital sinus ,total mobilization

Kalantari M
Department of Pediatric Surgery, Tehran University of Medical Sciences, Tehran, Iran

Abstract: the most common contemporary vaginoplasty surgeries for CAH, UGS and cloacal anomalies.
When a urogenital sinus (UGS) associated with High vagina and urethra, reconstruction of vagina and external genitalia in infants is quite challenging. So that vaginoplasty is done when the child is older and larger.

Material and method: in our cases (42patient) CAH was the commonest etiologys) (30cases). Low typevagina in30and high vaginal in 12 cases.

Results: in low group we had vaginal inlet stenosis in 2 patients, and in high type 4inlet stenosis with 3 cases redo operation.