

## *Bosnian Paediatric Surgery and Urology Teaching Project*



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A project of Kind Cuts for Kids,  
supported by  
The Department of Paediatric Surgery, Klinički Centar Univerziteta, Sarajevo  
and  
Bosnia and Herzegovina Department of Health

## *Introduction*

The May 2015 visit to Bosnia is the fourth to that country, and one of two country visits to the Balkans in 2015. This trip was again more successful than the previous visit and followed a mission to assist with Paediatric Surgical teaching in Kosova (see separate report).

In Bosnia and Herzegovina, Paediatric Surgery is advantaged by a strong team of trained Paediatric Surgeons, but disadvantaged by the imposing recent history that has set the country back in infrastructure, training and expertise in the care of surgical disease in children, a perspective that pertains to each of the subspecialties that care for disease. There has recently been a significant improvement in the facilities for radiological investigation, emergency theatre facilities and neonatal high level care, and soon to be improved facilities for elective surgical care.

To recap on the country of Bosnia from previous reports; it is a country that has only very recently been through the experience of war; many scars of which are still evident in the unrepaired buildings, the memorial monuments and the injured people. The photos show damaged buildings and the memorial to women and children killed in the recent war.



## *Two Country Summary*

Since 2011, five visits have been made to Kosova, and four to Bosnia. During these visits to Bosnia, we have conducted over 107 consultations for 68 patients, 42 of whom have had 131 operations, during 64 anaesthetics; 8 have had two anaesthetics and 2 have had an operation under three separate anaesthetics, usually for follow-up multistage surgery during a visit subsequent to their original surgery. These numbers have been accumulated over a 4 year period.

Overall, in the 16 visits to four countries in the Balkans, there have been 304 patients who have been seen during 418 consultations; 149 have been operated upon, undergoing 453 procedures.

## *Department of Paediatric Surgery - Sarajevo*



The Department of Paediatric Surgery has changed very little since last year, but with the return of Dr Carmen Dedic from maternity leave and one of the junior surgeons being on assignment in Turkey. The participation of the team in the major operations and discussion was extensive, with most surgery conducted in the usual Paediatric Surgery theatre in the older part of the facility, but two procedures were performed in the state of the art facility recently established.



## Paediatric Surgery – Bosnia 2015

### Consultations

In 2015, ten females and 19 males were reviewed - more than previously - 13 of who underwent surgery; the diagnoses were as seen below, and the most common problem was either urological or an anorectal anomaly.

| Gender | DOB        | Date       | Pathology                                 |
|--------|------------|------------|---|
| Female | 15/03/2009 | 12/05/2015 | Recto-vaginal fistula – megarectum        |
| Female | 28/06/2013 | “          | Anorectal anomaly - Huge rectum           |
| Female | 12/04/2014 | “          | Micro colon                               |
| Male   | 29/01/2002 | “          | Epispadias + PUJ obstruction              |
| Male   | 13/05/2002 | “          | Horseshoe Kidney and COPUM and OE and TOF |
| Male   | 11/02/2012 | “          | Anorectal anomaly - poor control          |
| Male   | 11/09/2013 | “          | Anorectal anomaly + multiple              |
| Male   | 19/06/2014 | “          | bladder exstrophy and spina bifida        |
| Female | 12/06/2007 | 13/05/2015 | ARA – megarectum                          |
| Male   | 10/08/2000 | “          | Retro-caval ureter                        |
| Male   | 10/08/2006 | “          | anal stricture, megarectum                |
| Male   | 15/03/2008 | “          | teratoma sacral as baby – incontinence    |
| Male   | 28/04/2011 | “          | PUJ L VUJ R                               |
| Female | 1/02/2003  | 14/05/2015 | anorectal anomaly                         |
| Female | 14/02/2003 | “          | Ureteric calculus – Left                  |
| Female | 3/12/2007  | “          | Epispadias – incontinent                  |
| Female | 5/05/2015  | “          | Dextrocardia and malrotation              |
| Male   | 14/04/2014 | “          | ARA - multiple anomalies                  |
| Male   | 20/09/2000 | 15/05/2015 | Choledochal cyst; cystic right kidney     |
| Male   | 21/03/2015 | “          | MCK abnormality; normal bladder           |
| Male   | 20/05/2010 | 16/05/2015 | Hypospadias                               |
| Female | 8/01/2015  | 17/05/2015 | Gastroschisis - short bowel syndrome      |
| Male   | 29/12/2004 | 18/05/2015 | Dysuria meatal stenosis                   |
| Male   | 30/12/2014 | “          | Horseshoe kidney, left moiety PUJO        |
| Female | 4/06/1998  | 19/05/2015 | Calyceal diverticulum                     |
| Male   | 8/09/2014  | “          | Hirschsprung’s disease                    |
| Male   | 22/04/2015 | “          | Gastric teratoma ?fetus in fetu           |
| Male   | 13/06/2013 | 20/05/2015 | Obstructed megaureter                     |
| Male   | 30/03/2015 | “          | Sequestration – L                         |



# Paediatric Surgery – Bosnia 2015

## Operative Procedures

Thirteen patients were operated on; one patient had two anaesthetics. A total of 38 different operative procedures were undertaken, all with the assistance a senior member of the Sarajevo team; usually with a number of observers. During each operation, excellent photographic documentation was undertaken to enhance the educational value of the visit.

| Gender | DOB        | Operation                          | Date       |
|--------|------------|------------------------------------|------------|
| Male   | 10/08/2000 | Ureteroureterostomy                | 19/05/2015 |
| Male   | 29/01/2002 | Cystoscopy                         | 13/05/2015 |
| "      | "          | Insertion of IDC over guide        | "          |
| "      | "          | Pyeloplasty                        | "          |
| "      | "          | Urodynamics                        | "          |
| "      | "          | Cystoscopy                         | "          |
| "      | "          | Pelvic reduction                   | "          |
| "      | "          | Ureterocalycostomy                 | "          |
| Female | 14/02/2003 | cystoscopy                         | 14/05/2015 |
| "      | "          | DJ stent insertion                 | "          |
| "      | "          | Ureteric dilatation                | "          |
| Female | 3/12/2007  | Cystoscopy                         | 18/05/2015 |
| "      | "          | Urodynamics                        | "          |
| male   | 15/03/2008 | Laparotomy                         | "          |
| "      | "          | Rectosigmoidectomy                 | "          |
| Female | 15/03/2009 | Laparotomy                         | 15/05/2015 |
| "      | "          | Pena - abdo perineal               | "          |
| "      | "          | Rectal resection                   | "          |
| "      | "          | Laparotomy - redo removal of clot  | 16/05/2015 |
| Female | 12/04/2014 | Closure of colostomy and ileostomy | 18/05/2015 |
| "      | "          | Colo-ileal anastomosis             | "          |
| "      | "          | Laparotomy                         | "          |
| Male   | 19/06/2014 | Bladder exstrophy closure          | 14/05/2015 |
| "      | "          | Inguinal hernia - left             | "          |
| "      | "          | Inguinal hernia - right            | "          |
| "      | "          | Omphaloplasty                      | "          |
| "      | "          | Osteotomy - anterior left          | "          |
| "      | "          | Osteotomy - anterior right         | "          |
| "      | "          | Osteotomy - posterior left         | "          |
| "      | "          | Osteotomy - posterior right        | "          |
| "      | "          | para-exstrophy flaps               | "          |
| Male   | 30/12/2014 | Ureterocalycostomy                 | 20/05/2015 |
| Female | 8/01/2015  | Adhesiolysis                       | 19/05/2015 |
| "      | "          | Laparotomy                         | "          |
| "      | "          | Small bowel imbrication            | "          |
| Male   | 21/03/2015 | Cystoscopy                         | 15/05/2015 |
| Female | 5/05/2015  | Ladd's procedure                   | "          |
| "      | "          | Laparotomy                         | "          |



### *Theatre Staff*

The Bosnian team was slightly changed from previous visits, with the return of one of the surgeons from maternity leave and one of the junior staff being away on an educational secondment in Turkey; the surgeons involved included Dr Nusret Popovic, Dr Asmir Januzi, Dr Carmen Dedic, Dr Kenan Karavdic, Dr Alena Firdus, Dr Zlatan Zvizdic, Dr Sadeta Begić-Kapetanović and the head of the unit Prof Adnan Hadzimuratovic; the Anaesthetic staff included Dr Amira Mesic, Dr Haris Halkic, Amina Gutosic, including technicians Enes Cizmic and Tarik Zametica, while theatre nurse support was provided for the long operative sessions by Amra Zubovic, Jasna Preljevic, Azem Catic, Armina Selmanovic and the excellent technician support provided by Mr Azam Catic; some of the staff are pictured below.

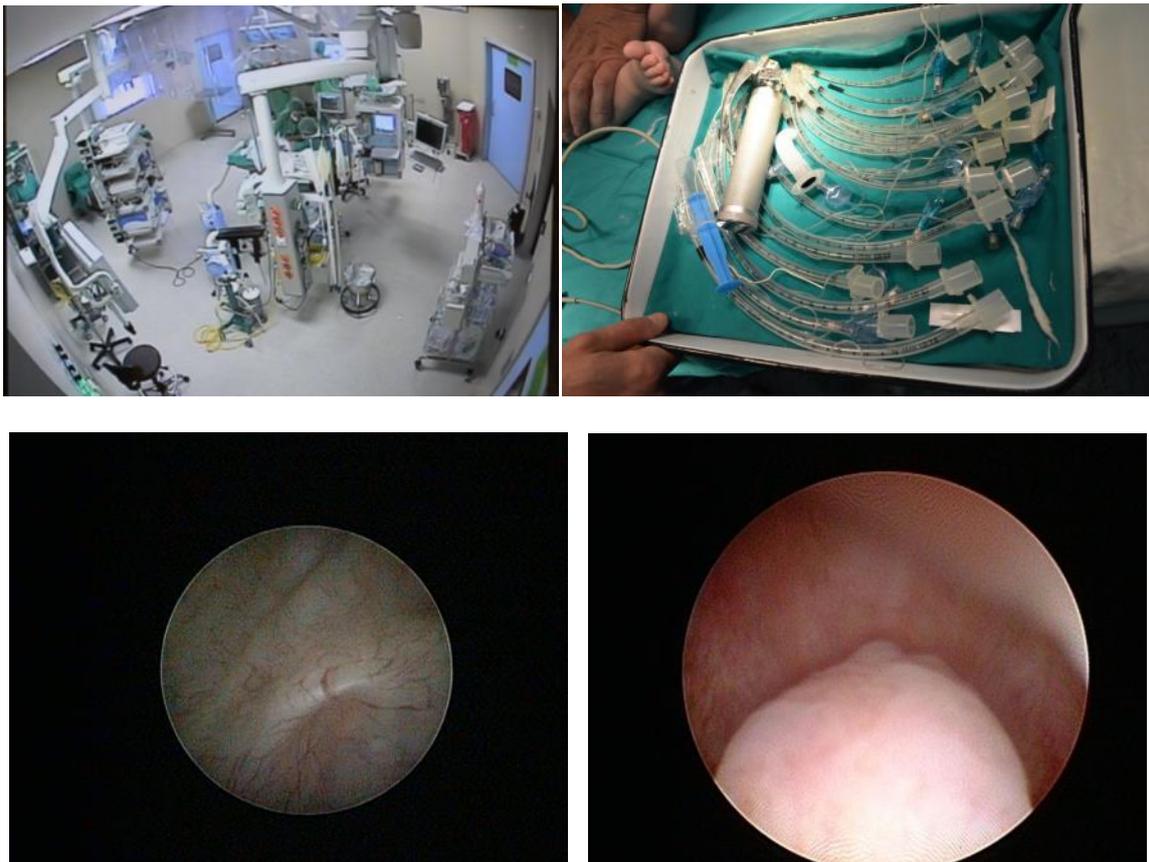


## *Equipment*

A new theatre complex has been built in the University teaching hospital complex, one that is state of the art, and well deserved by the hospital and the community. There do, however, continue to be infrastructure issues, with the geographical isolation of the Paediatric Intensive care unit from the main Paediatric surgical ward that compromises care because of the lack of close surgical involvement, and the distance from where the families are located, which tends to be near the main ward which is on the other side of the city. The need to transfer patients while anaesthetised is also a problem. And, despite the new facility, some of the basic surgical needs are still not met, such as fine sutures and well maintained instruments. Further donations of basic equipment and disposable items, such as fine sutures, appears necessary.

The exclusion of parents from the intensive care unit is also problematic.

Below is a photo of the image projected onto a screen from the camera in the centre of the theatre lights, showing both the sophistication of the theatre and the associated video recording equipment. The second photo is of the reused endotracheal tubes that are usually used as single use items in many countries; the lower two images are of a recording during a procedure of looking into the bladder; the first in the bladder, of the ureter opening, the second in the urethra just below the bladder neck. Other equipment advances have included the setting up of computerised access to radiological images in the surgical, clinical meeting room, with a similar facility being arranged in the operating theatre.



## Radiology

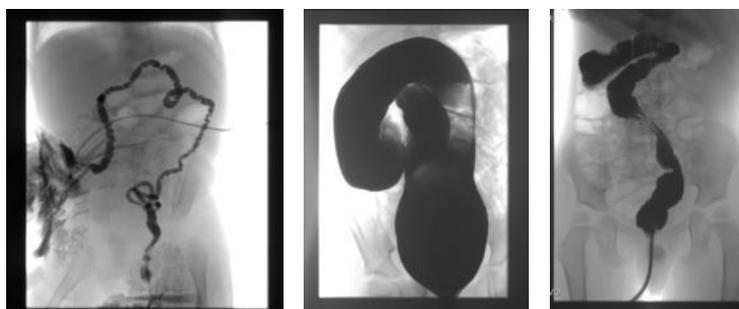
Radiology has changed markedly during the four years Kind Cuts for Kids has been visiting Bosnia. Digital images are now available in both theatre and the clinic meeting room, with morning clinical meetings often involving the two radiologists with a subspecialty interest in Paediatrics. MRI is frequently used in the evaluation of the renal tract; more commonly than in Australia. One improvement needed for the future will be the addition of the availability of radiological screening in the operating room.



The MRI images show three different patients; a. with an obstructed component of a horse-shoe kidney; b. An upper pole calyceal diverticulum of the left kidney; c. A ureteric stone in the left ureter.



Dr Rao is pictured conducting an ultrasound in the ward with the high quality machine that is housed within the surgical facility, making easy access to screening images.



Barium studies were conducted on several patients, including three shown above; a microcolon girl, a megarectum boy, and a boy born with an imperforated anus.

## *Clinical Cases*

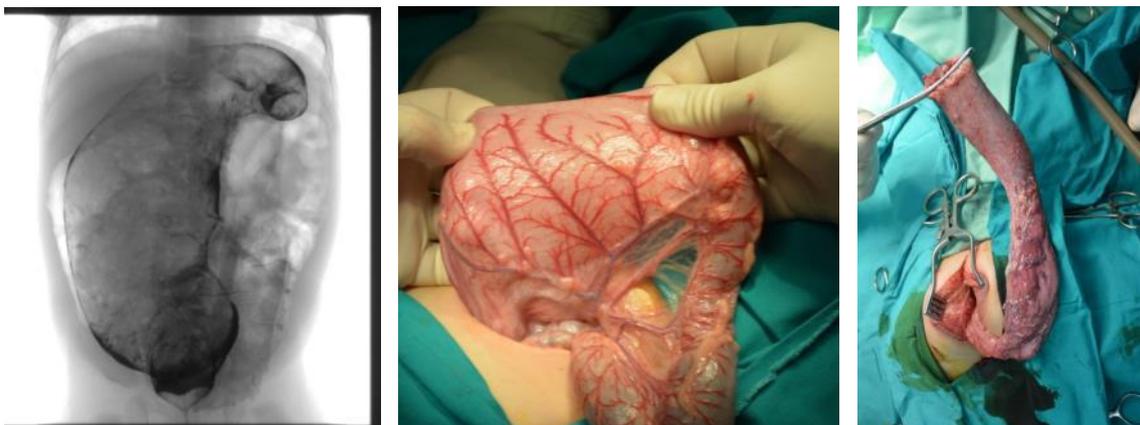
### *Case 1*

Nadja was born with his intestine outside his abdomen, and with very little blood supply; most of the gut died, but he has survived on intravenous nutrition, and is in need of a better alternative. In a difficult situation, a technique that has been successful for improving the function of the dilated residual bowel, an operation was performed that un-kinked the previous connection, then folded the bowel in on itself longitudinally to improve the forward movement of its contents, and decrease the bacterial overgrowth in the lumen; an operation safer than alternative procedures, and without removal of any of the absorptive surface that some suggest. The images are of the boy at the time of surgery, the dilated small bowel and the appearance after the stitching of the bowel.



### *Case 2*

Nadin was reviewed 12 months after the surgery shown below. She had presented with an anterior ectopic anus that was noted at birth, with bowel function that was able to be controlled by laxatives and washouts, despite the huge rectum seen in both the barium study and the intraoperative photos; a situation similar to an almost identical patient in Kosova this year. A single stage abdomino-perineal procedure enabled removal of the megarectum and establishment of normal function, with a healthier happier child and family since. An important part of the program is the follow-up of cases.



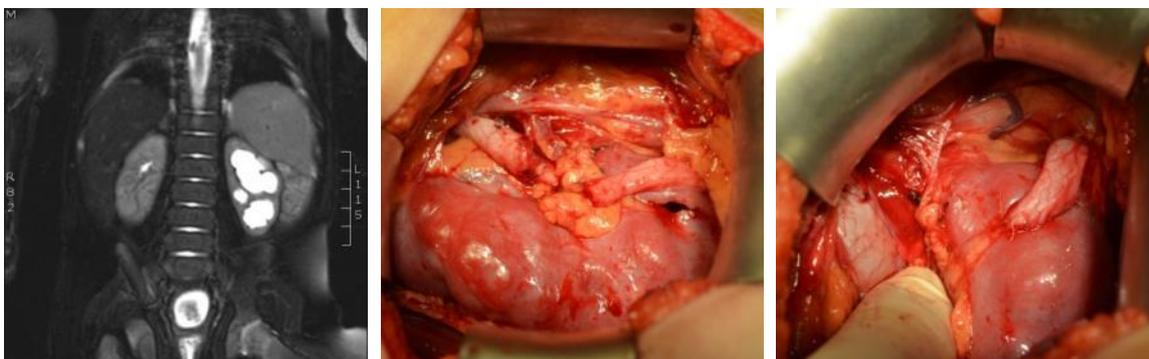
### Case 3

Alejma was born a healthy baby, but then started to vomit bile. A chest x-ray showed her heart on the wrong side, and her abdominal organs were too. The medical jargon is dextrocardia and situs inversus. Normally, with the associated diagnosis of malrotation with twisting of the gut, is shown of an x-ray investigation that includes the baby swallowing barium, but the complicated anatomy makes the life threatening diagnosis more difficult to make. At operation, the intestine was twisted and at risk of it dying, with the consequent outcome for the child. All was well and she went home a happy healthy baby within a few days.



### Cases 4 & 5

A procedure new to Bosnia was used in the management of two boys who each presented with a horseshoe kidney. In such patients, the lower pole of each kidney is joined, resulting in the drainage of urine from the kidney being compromised by needing to “climb” over the bridge of kidney tissue. Edvin, a 12 year old boy and Adian, a 6 month old baby had the ureter on the affected side joined to the lower part of the kidney, rather than more routine surgery that usually ultimately fails. The images show the blocked kidney and the ureter laying next to the incision into the kidney; then the ureter joined to the kidney. Both boys made a good recovery.



# Paediatric Surgery – Bosnia 2015

## Donations

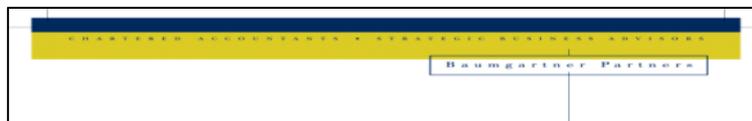
| Description of Equipment                                | Quantity     |
|---|--------------|
| Urine Drainage Bag with 200ml Meter                     | 1 Box (10's) |
| Cliny Silicone Malecot Catheter size 10Fr               | 7 pcs        |
| Unomedical Foley 2 way paed catheter silicone 8FG 30cm  | 10 pcs       |
| Unomedical Foley 2 way paed catheter silicone 10FG 30cm | 9 pcs        |
| Unomedical Foley 2 way paed catheter silicone 12FG 40cm | 9 pcs        |
| Feeding Tube CH08 40cm                                  | 12 pcs       |
| Feeding Tube CH06 40cm                                  | 12 pcs       |
| Ureteral Dilator 8Fr/ 60cm                              | 2 pcs        |
| Ureteral Dilator 6Fr/ 60cm                              | 2 pcs        |
| Ureteral Dilator 10Fr/ 60cm                             | 2 pc         |
| Ureteral Dilator 12Fr/ 60cm                             | 2 pcs        |
| Edge Insulated Needle Electrode 10.16cm                 | 5 pcs        |
| Edge Insulated Needle Electrode 7.2cm                   | 50 pcs       |
| HiWire Nitinol Core Wire Guide 150cm                    | 3 pcs        |
| Leukoplast elastic self adhesive plaster 2.5 cm x 2.5m  | 6 pcs        |
| Micropore 3M  | 3 pcs        |
| Tensoplast 10cm x 2.5M                                  | 6 pcs        |
| Surgical blades #11                                     | 20 pcs       |
| Surgical Blades#15                                      | 1 Box        |
| Coated Vicryl 1 135cm                                   | 9 pcs        |
| Coated Vicryl 2-0 70cm                                  | 36 pcs       |
| Coated Vicryl 3-0 70cm                                  | 36 pcs       |
| Coated Vicryl 4-0 70cm                                  | 72 pcs       |
| Coated Vicryl 5-0 45cm                                  | 48 pcs       |
| Coated Vicryl 6-0 45cm                                  | 36 pcs       |
| Coated Vicryl 7-0 45cm                                  | 48 pcs       |
| Fascial Dilator 6Fr                                     | 2 pcs        |
| Fascial Dilator 8Fr                                     | 3 pcs        |
| Fascial Dilator 10 Fr                                   | 4 pcs        |
| Fascial Dilator 12 Fr                                   | 2 pcs        |
| Dilator 14Fr  | 2 pcs        |
| Derma Shields - gloves                                  | 20 pcs       |
| Electrosurgical accessories                             | 5 pcs        |
| Hypafix roll  | 1 pcs        |



## *Sponsors and supporters*

Lawson Delaney and Johnson Recruitment, our Gold Sponsors, ODC Design and Baumgartner Partners, our Silver Sponsors, plus our Platinum Members are the principle contributors to the financing of the Bosnian project; important and significant further contribution has been made by fundraising activity within the Albanian community in Melbourne, the Manningham and Preston Rotary Clubs in Victoria, with additional contribution from Europe, including Bosnalijek who hosted a dinner for the theatre staff, and the Belvedere hotel in Sarajevo. Warner Webster also assisted by providing discounts for surgical equipment taken as part of the mission.

All the nursing staff of theatre and the ward, the anaesthetic team, the radiologists, paediatricians, nephrologists and the surgical team have contributed well beyond the call of duty, not only in the care of the children and a dedication to learning from the clinical interchange, but by the warm welcome and hospitality shown to the visiting team.



As always, we thank the families who give us the honour of assisting their children.