From the Editors Desk:

General Surgery under Local anaesthesia: (continued...)

Another most interesting procedure is Excision of Pilonidal Sinus. The ‘Nest of hair’ in the natal cleft, is quite a tricky disease to treat.

Traditionally, two methods are described, Open method and Closed method (that is, primary closure). Anaesthesia given is GA or if the sinus is low, then a little high spinal anaesthesia can be given. Then, the patient is turned upside down, to lie on the stomach. In this position, the procedure is done, which takes anywhere between 30 to 45 mins. Our experience of excision & primary closure, is best done under local anaesthesia, given in the form of a field block. Convince the patient of the benefits of local anaesthesia and with minimal sedation, the procedure can be done with good results.

Other examples of Field block is Umbilical and Epigastric hernia repairs. Even instillation of a mesh can be performed under a good local infiltration anaesthesia. Fatty hernia of the midline, that is, the defects of Linea Alba, if small, can be comfortably performed under local block. As shown in the diagram, all four sides of the hernia are infiltrated. First: deep, up to the fascia, then in the tissue and skin, covering one side, then it is repeated in all the four sides. Second: once the incision is taken and the anterior sheath exposed, the local can be re-infiltrated. In total, approximately 30 ml of the combined mixture is used. If you recollect our earlier article, we use cruciate incision along the lower border of the umbilicus so as to achieve a cosmetic scar. Though, the repair inside remains elaborate.

Similarly, sub-coastal blocks can be used for larger hernias in the epigastric region. Though, this requires a certain amount of expertise.

Inguinal block is ideal for all types of Inguinal hernias in male as well as female patients. The basic nerve blocked is mainly the Ilio-inguinal nerve, along with ilio-hypogastric and genito-femoral nerves, these lie deep to the ilipectineus fascia, medial to the anterior superior iliac spine. The site of injection is marked as ‘X’, medial to the anterior superior iliac spine and the lower ‘X’ is to mark the pubic tubercle, the other end of the inguinal ligament. Dotted transverse line is the preferred incision site.

Skin infiltration at the incision site is always performed. This block is not very painful for the patient, however, sedation can be given during injection to reduce anxiety.

For the surgeons, it requires a certain amount of skill and getting used to, but, the advantages are tremendous. Still, in general, only 10% of hernias are operated under local anaesthesia.

Recommendation is to monitor the patient’s pulse & oxygen saturation and preferably, sedation to be administered and monitored by an anaesthesiologist. Although, in several centers in Europe and other parts of the world, there is no sedation or anaesthesiologist, but, well trained staff, to assist the surgeons for routine hernia surgeries.

The fear of toxicity/overdose of local anaesthesia can be reduced by calculating the dosage. For example, the usual requirement for an adult hernia repair in a man of 70 kg is 40 ml of anaesthetic solution, that is, 20 ml of 2% lignocaine with adrenaline, which works out to be 400mg and 20 ml of 0.5% bupivacaine which is 100 mg. Both well within the limits. If more is required, a diluted solution of 1% can be used. Patient, thus attains the effect of anaesthesia immediately and is pain free for 6 to 8 hours.

* 36th ACRSI Conference is being held in Khajuraho, M.P., 20th-22nd Sept. 2013. For details, log on to: www.acrsicon2013.in

* 11th IAAS Congress will be held in Barcelona, Spain, from 8th to 11th May, 2015.
Also, while injecting, use a 27 G needle (which is very fine), with continuous movement, in a fan-wise manner, care is taken of not injecting a bolus of more than 5 ml at any point, will help in preventing pain & toxicity to a certain extent. Usually, inadvertently injecting into a blood vessel creates the problem. Therefore, in the vicinity of blood vessels, it is recommended to aspirate and check before injecting.

We should remember, signs of toxicity includes auditory (ringing in the ears), and visual disturbances, tingling around the lips and mouth, vertigo, dizziness and hallucination. Cardio-vascular depression is rare. As recommended, equipment to provide cardio-pulmonary resuscitation and 20% Lipid infusion should be always available in the OT and regularly checked.

Complications in the post operative period is same for any form of anaesthesia. These are: Haematoma at operated site, Urinary retention, Infection and recurrence. In a study conducted by Hernia Trialists Collaboration in the EU, recurrence rate with mesh for inguinal hernia repair, was found to be 1.4% and without mesh was 4.4%, irrespective of the type of anaesthesia. However, in patients operated under local anaesthesia, urinary retention was not seen, probably, due to early ambulation.

A study on cost effectiveness was performed in Sweden, and it was found that, as compared to regional and general anaesthesia, local anaesthesia was more cost effective, probably due to the fact that the patient spent less time in the OT; shorter duration of hospitalisation, less post operative pain and therefore, less post operative care.

Care is however required in case selection, very large hernias, obese patients, irreducible hernias, and children, should be avoided for surgeries under local anaesthesia.

All in all, 95% cases of inguinal hernia repair can be performed under local anaesthesia. Even in patients where GA or other form of anaesthesia is contraindicated, LA is the method of choice.

Varicocele surgery can also be performed under the inguinal block and skin infiltration. All methods of ligation of the testicular vein can be performed by this method of anaesthetic block.

Continuing down to the scrotal surgeries, Hydrocele is a fairly common procedure, and in fact, one of the first surgeries taught to a young surgeon during their training, is best performed under local anaesthesia as day case. We usually prefer to do the Sharma & Jhawer technique of Minimal dissection, with a cosmetic incision. Local anaesthesia used is a Cord block. Here, the precaution taken is to use plain lidocaine/lignocaine with bupivacaine, that is, since the cord is an end-artery, adrenaline solution is to be avoided, so as to prevent ischemic damage to the testis. Though, the blood supply for the testis is very well compensated through the pudendal and scrotal arteries, still, best avoided, especially if large quantity of local is required. Another word of caution for the surgeons, avoid traction on the testis while operating to prevent vaso-vagal reaction and to use bipolar cautery if possible. In large hydrocele where access to the cord is difficult, you may have to first empty the scrotum by giving local & puncturing, and then the cord block, followed by surgery.

Other surgeries like Lipoma & encysted Hydrocele of cord, epididymal cysts can be easily performed under this block.

Vasectomy is best performed by skin infiltration and usually does not require complete cord block.

- Dr. T. Naresh Row
(To be continued..)