

EDITORIAL

The problem of access in suprarenal Ganglioneuroblastoma

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Introduction :

Ganglioneuroblastomas (GN) are benign, neurogenic tumors arising mainly from central or peripheral components of the autonomic nervous system. The tumor has a reported incidence of only 1–5% in the literature

⁽¹⁾ They are rare compared with other benign neurogenic tumors, such as schwannomas and neurofibromas ⁽²⁾.

The common locations for neuroblastoma are adrenal gland, paraspinal retroperitoneum (sympathetic ganglia), posterior mediastinum, head, and neck. Locations such as the urinary bladder, bowel wall, abdominal wall, and gallbladder are considered unusual. ⁽³⁾

Case Presentation :

This case was referred to the urology from the general surgical department as a difficult transperitoneum open access for right suprarenal tumor .She was female of 50 years, presented with right loin pain for 3 years, dull , localized ,used to disappear without analgesia .Later the pain necessitate regular analgesia. There was suprapubic pain and burning micturition ,no hematuria ,no abdominal distension and no loss of weight .She is menopause . On examination: patient looks unwell , not Pale and not jaundiced .Pulse 80/min. BP 130/70 , temperature 37.4 C.others was right paramedian scar, abdomen not distended , no palpable liver There was right flank tenderness , kidneys were not palpable . Digital rectal examination revealed 3rd degree pile .

Serial investigations were done including complete hemogram, urine analysis ,renal function tests , hormonal assay (Cortisone and catecholamine), showed normal results .Investigations were revised (ultrasound and CT) in the light of the diagnosis of suprarenal tumor (Figure 1&2) .

Figure (1)

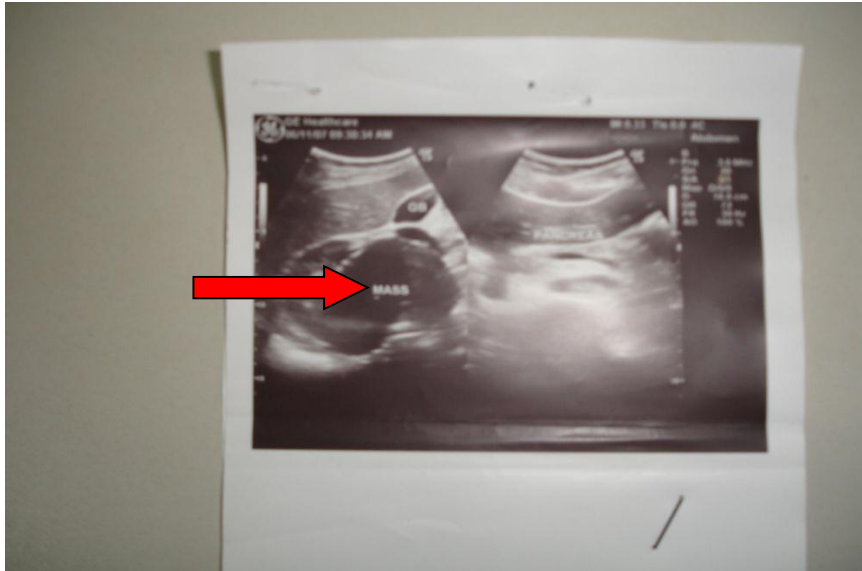
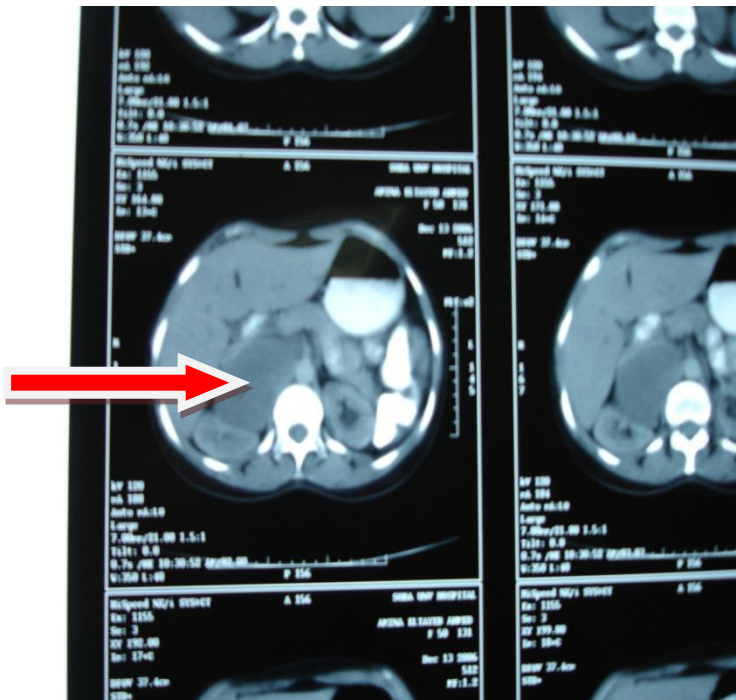


Figure (2)



The first intraoperative findings (General surgery) was liver pushed upward by a retroperitoneal tumor posterior to pancreas. Inferior vena cava (IVC) was found to be dilated & pushed forward . Right & left renal veins were dilated . Huge midline retroperitoneal mass posterior & medial to IVC. The right kidney is away from the tumor.

EDITORIAL

The upper limit of the tumor is below the left liver lobe. There was difficult dissection of the tumor through this approach ,and presumably abdomen was closed without removing the tumor .

Urology unit took over upon the request of general surgery unit. Patient reexplored after six weeks for Rt. Adrenalectomy through lateral retroperitoneum approach (T10) .Intraoperative findings were huge Rt.suprarenal mass(about 40 X 60cm) . Adrenalectomy was done and it was easy .Uneventful post operative course .

Histology Report : Ganglioneuroblastoma



Discussion :

Open adrenalectomy can be performed through either a transperitoneal or retroperitoneal approach. The transperitoneal approaches include midline, subcostal, and thoracoabdominal. The retroperitoneal approaches include flank and posterior lumbodorsal. The advantages of the transperitoneal approaches are better exposure for larger tumors and excellent access to the great vessels and retroperitoneum ⁽⁴⁾. The main disadvantages are prolonged ileus and difficult exposure in morbidly obese patients. The retroperitoneal approach results in less ileus and may result in shorter hospital stay. There is a smaller operative field, and access to larger tumors and

EDITORIAL

surrounding involved organs may be difficult. Surgery of the adrenal gland consists of operative procedures to correct endocrine abnormalities or to treat malignant disease.⁽⁴⁾

The introduction of laparoscopic adrenalectomy has revolutionized adrenal surgery and largely supplanted the open approach. However, we are not yet ready to relegate open adrenal surgery to the history books.⁽⁵⁾

New technology, such as robotics and percutaneous ablation, is being developed. These minimally invasive nonsurgical approaches may obviate the skills of the surgeon. Nevertheless, it is important that the urologist be part of the treatment team, either as a direct practitioner of the technique or in direct consultation in guiding therapy.⁽⁶⁾ Furthermore, Gill and colleagues have reported their experience with a transthoracic laparoscopic approach that may be ideally suited for this situation. The thoracic cavity is entered thoroscopically, the diaphragm is divided, and the adrenal gland is approached superiorly.⁽⁶⁾

Tumor size is a relative contraindication to laparoscopic surgery. In the initial experience of many laparoscopists, a cutoff of 5 or 6 cm was chosen because of the increased risk of treating an adrenal cortical carcinoma. Subsequently, ample empirical evidence has accumulated to suggest that specimen size is not necessarily a contraindication to laparoscopic adrenalectomy. MacGillivray and Henry recommend an upper size limit of 12 cm for laparoscopic adrenalectomy^(7,8). Conversion to open surgery is most often due to infiltrative adrenal cortical carcinoma. In the largest series, conversion occurred electively after initial laparoscopic exploration and not because of hemorrhage or other emergent causes.^(7,8)

In Sudan there is no specialized laparoscopic surgery in urology and if it is available in the future, all urologic surgeons must be familiar with the open techniques in the event that emergent open surgical conversion is necessary.

References :

1. Leeson MC, Hite M. Ganglioneuroma of the sacrum. *Clin Orthop Relat Res.* 1989;246:102–105. [PubMed]
2. Lamichhane N, Dhakal HP. Ganglioneuroma of pelvis-an unique presentation in a young man. *Nepal Med Coll J.* 2006;8:288–91.
http://www.nmcth.edu/nmcj_articles_pdf/volume_wise/nmcj_vol8_no4/Nirmal_Lamichhane.pdf
[PubMed]
3. Brossard J, Bernstein ML, Lemieux B: Neuroblastoma: an enigmatic disease. *British Medical Bulletin* 1996; 52: 787-801.
4. Georger B, Hero B, Harms D, et al: Metabolic activity and clinical features of primary ganglioneuromas. *Cancer* 2001 May 15; 91(10): 1905-13[Medline].
5. Cadeddu et al., 1999. Cadeddu JA, Chan DY, Hedican SP, et al: Retroperitoneal access for transperitoneal laparoscopy in patients at high risk for intra-abdominal scarring. *J Endourol* 1999; 13:567-570.

EDITORIAL

6. Chen et al., 1998. Chen RN, Moore RG, Cadeddu JA, et al: Laparoscopic renal surgery in patients at high risk for intra-abdominal or retroperitoneal scarring. *J Endourol* 1998; 12:143-146.
7. Doublet and Belair, 2000. Doublet JD, Belair G: Retroperitoneal laparoscopic nephrectomy is safe and effective in obese patients: A comparative study of 55 procedures. *Urology* 2000; 56:63-66.
8. Fazeli-Matin et al., 1999. Fazeli-Matin S, Gill IS, Hsu TH, et al: Laparoscopic renal and adrenal surgery in obese patients: Comparison to open surgery. *J Urol* 1999; 162:665-669.