

Dear Doctor,

Greetings from Micro Labs limited. We are happy to bring you **“NU Rounds”** which contains latest and interesting news in the field of Urology.

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Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Ltd

Testosterone replacement along with alternate day Tadalafil for patients with late-onset hypogonadism

Introduction

Patients with late-onset hypogonadism show reduced sexual desire, dysuria, urinary frequency and erectile dysfunction. The front line therapy is the Testosterone Replacement Therapy (TRT). However, PDE5 inhibitors, such as sildenafil and tadalafil, are used extensively for treating ED and daily tadalafil (5 mg) is a



primary therapeutic option for LUTS in patients with BPH. This study aimed to analyse the safety and efficacy of the combination of testosterone replacement therapy along with alternate-day tadalafil (10 mg) in patients with late-onset hypogonadism.

Methods

This study was designed as an open-label, randomized, cross-over study which included 29 patients with late-onset hypogonadism. The patients were randomized to receive either testosterone replacement therapy for 12 weeks followed by combination treatment for 12 weeks (Group 1) or combination treatment for 12 weeks followed by testosterone replacement therapy (Group 2). Blood tests were performed and questionnaires which assessed symptoms were administered before and after the treatment period to analyse the safety, efficacy and participants' treatment preferences.

Results

The therapy was well-tolerated by 26 participants and only one-participant experienced an adverse event in the form of rheum symptom. The study results significantly showed that the combination therapy was preferred as the scores on the Aging Male Symptoms scale and the modified short version of the International Index of Erectile Function, and Overactive Bladder Symptom Score were notably improved in the group treated with combination therapy (Group 2). No significant difference between the phases were observed in Group 1. Twelve out of 14 participants in Group 1 and 11.

Discussion

Existing studies have explained the potential mechanisms and have showed the efficacy of monotherapy with tadalafil or TRT as the treatment option for late-onset hypogonadism. In the view that the combination therapy would be associated with much improved effectiveness, this study aimed to investigate the regimen as with an open-label, randomized, crossover design.

AMS scores, m-IEF-5 scores, and OABSS in Group 2 showed significant improvement compared to Group 1, in the CoT phase. According existing studies, the efficacy of tadalafil is lowered in older men. It is recommended for patients with LOH associated with metabolic syndrome. Participants were young and BMI was higher in Group 2, which could explain the greater efficacy of tadalafil observed in this group. Otherwise, with patients' character unknown, it would be difficult to obtain an additional benefit from gradual add-on tadalafil after TRT. A washout period between the treatment phases may have eliminated the selection bias associated with variations in the timing of tadalafil add-on. Majority of participants selected the combination therapy due to its high effectiveness.

Conclusion

Testosterone replacement therapy with add-on alternate-day tadalafil showed to be a safe and efficacious combination regimen, for the treatment of late-onset hypogonadism.

Reference

Narukawa T, Soh J, Kanemitsu N, Harikai S, Fujihara A, Ukimura O. Efficacy of testosterone replacement therapy plus alternate-day tadalafil for patients with late-onset hypogonadism: An open-label, randomized, crossover study. *Int J Urol.* 2020 Dec 19.

Post-traumatic adrenal hematoma: A case report

Introduction

Post-traumatic adrenal hematoma, though rare but has severe complications. It is hard to diagnose, however computed tomography, which is usually performed during lesion assessment of violent thoraco-abdominal trauma, can precisely confirm the diagnosis.

Case Report

A 47-year old who met with an accident was brought to the emergency department, with the presence of thoraco-abdominal impact. Blood pressure was stable and auscultation revealed fluid effusion at the right pulmonary base, presence of pain in the right chest anterior wall, no dermal opening, right hypochondrium defense. He was started on combination therapy of IV paracetamol (1g) and IV ketoprofen (100mg). A thoraco-abdomino-pelvic tomodensitometry revealed a hemopneumothorax of average abundance on the right side, a fracture of the middle arch of the first and eighth ribs, along with the transverse process L1. Surgical intervention was indicated in front of the medium abundance pneumoperitoneum and the violent shock of the accident to eliminate injury to the hollow organ and integrity of the digestive tract. Adrenal hematoma was managed conservatively. Patient showed improvement after right chest drainage. The duration of hospital stay was 8 days. The clinical and radiological control at the end of 6 months revealed the disappearance of adrenal hematoma.

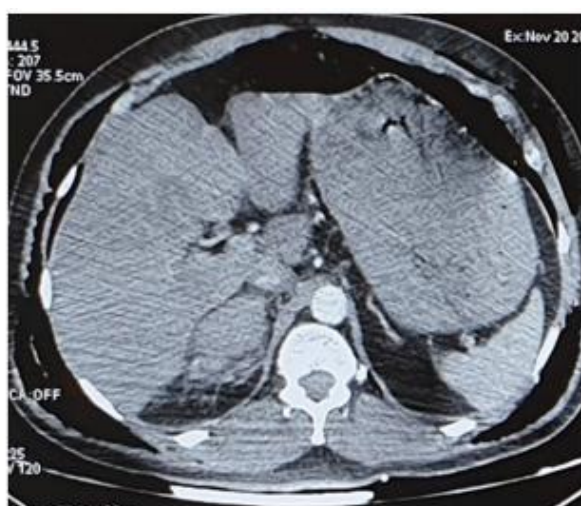


Fig. 1. Right adrenal hematoma.

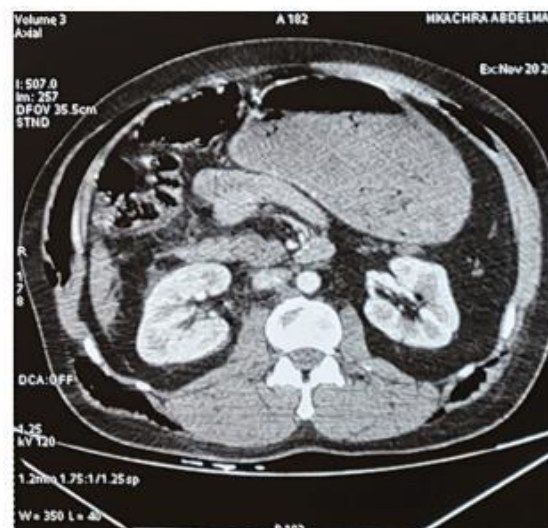


Fig. 2. Intact right kidney.

Discussion

Two mechanisms of trauma have been found in the literature: One involves direct trauma to the adrenal region due to compression of the adrenal gland on to the spine, following a violent abdominal impact. Second involves the deceleration phenomenon, which results in tearing of vessels at the region of the adrenal capsule. Right adrenal gland damage seems to be the most common presentation.

Most commonly, computed tomography shows diffuse oval hypertrophy of the adrenal gland, with a rosy opacity appearance, central hyperdensity and peripheral hypodensity.

Majority of the patients with post-traumatic hematomas carry a good prognosis. Local, haemorrhagic or endocrine complications should be suspected in the presence of clinical and biological abnormality. Conservative treatment (appropriate bed rest and analgesics) should be considered primarily in order to preserve the functioning of the adrenal gland and to prevent any surgical complications, which may have a long-term impact on the adrenal gland. Surgery is only justified in case of diagnostic doubt or when the functional prognosis or vitals are at risk.

Conclusion

Post-traumatic adrenal hematoma is an uncommon condition. It is commonly associated with other thoraco-abdominal injuries in patients with severe trauma. Computed tomography becomes the gold standard for confirming the diagnosis. Conservative treatment and surgical abstinence should be the primary therapeutic focus.

Reference:

Fadil Y, Bai W et al. Post-traumatic adrenal hematoma: A case report and review of literature. *Urology Case Reports*. 2020;35:101534.

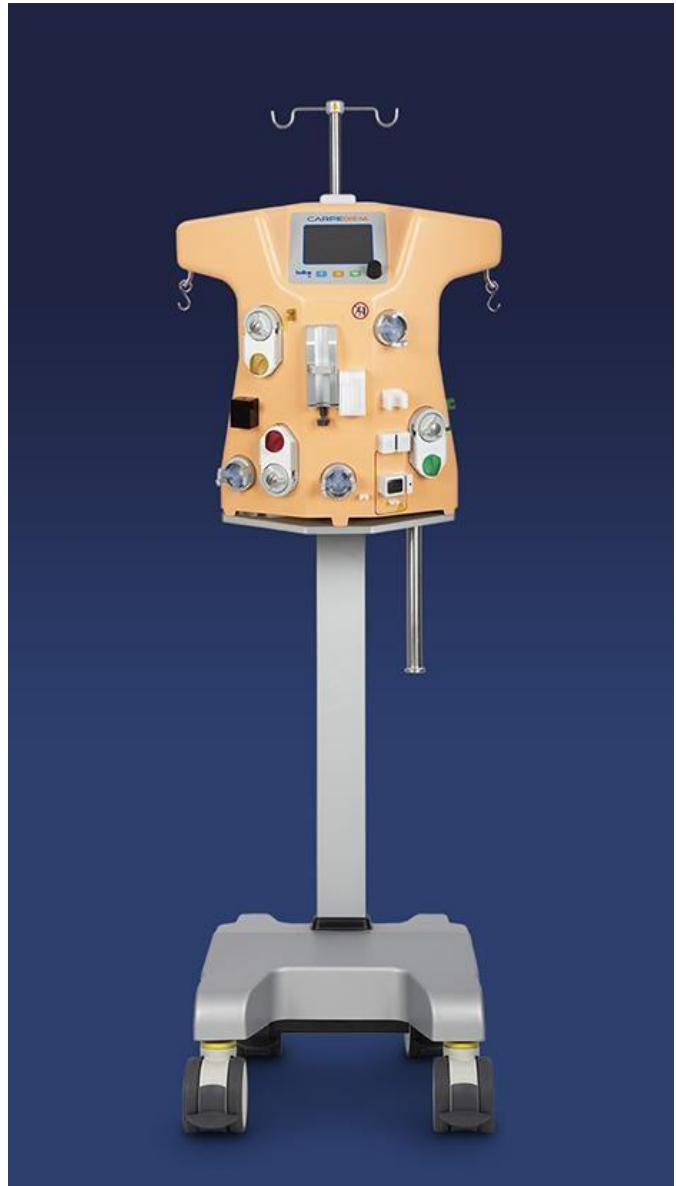
Acute Dialysis Machine for Paediatrics and Neonates

Industry's first and only dedicated paediatric and neonatal acute dialysis machine, is being released by Medtornics, USA. The machine has now received FDA approval for marketing.

The continuous renal replacement therapy (CRRT) device is to be used for patients weighing between 2.5 and 10 kilograms (5.5 to 22 pounds) with acute kidney injury, or that are fluid overloaded, and requiring haemodialysis or hemofiltration therapy.

In children undergoing cardiac surgeries, fluid overload is the most common occurrence. Acute kidney injuries can have numerous etiologies. Typically, CRRT machines designed for adults are being used to treat neonates and young children, which is usually associated with certain risks and limitations.

Existing technologies to perform CRRT might not be optimal to treat very young and fragile infants as it may expose them to various risks. This new system is dedicated for use in these patients which enables increased precise neonatal CRRT treatment and, potentially, reduces these risks.



Available at: <https://www.medgadget.com/2020/12/pediatric-and-neonatal-acute-dialysis-machine-in-the-u-s.html>
(Accessed on 22nd December 2020)



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