



ORIGINAL RESEARCH PAPER

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GIANT PUERPERAL MEGACYSTIS

**KEY WORDS:** Puerperium, megacystis

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ABSTRACT

Urinary bladder is derived from hindgut derivative known as urogenital sinus, and is visible by 15 weeks of intrauterine life. Having a wall thickness varying between 3 to 5mm in adult life with a normal capacity upto 400ml, it empties completely on voiding. But it can distend silently, magically and dramatically without rupture confusing even the most experienced experts. Here in this case report, it has surpassed all past literature reports.

INTRODUCTION:

Megacystis is a rare condition or disease that is identified by an abnormally large or distended bladder. Normal capacity of bladder is 400 to 600ml during day time and 800ml during night time.

Usually the bladder walls become thicker and then grow because they are overstretched in chronic over distension. An enlarged bladder can be present from birth or it can occur due to an obstruction in bladder outlet or urethra. It occurs most commonly in the young and the old. Intrauterine megacystis in early weeks serves as a 'marker' to diagnose congenital anomalies.

CASE REPORT:-

Patient, Mrs M.K., 20 year old, a primigravida delivered vaginally a 2.430 kg baby in a medical college with medio-lateral episiotomy 13 days back. She was discharged after 2 days in a normal manner free from any ill effect. Breast feeding was normal as usual.

She presented with a gradually increasing abdominal swelling for last one week, reaching a size of full term pregnancy reaching upto epigastrium.

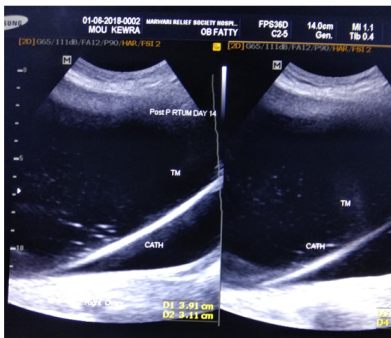


Figure 1: One the first day of presentation with full cystic mass and catheter inside

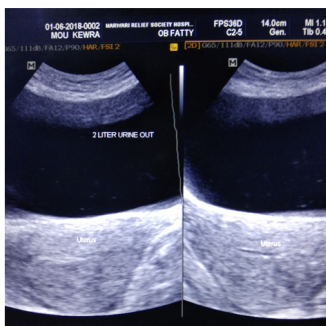


Figure 2: Mass after drainage of 2 litres of urine, Uterus descending to pelvis

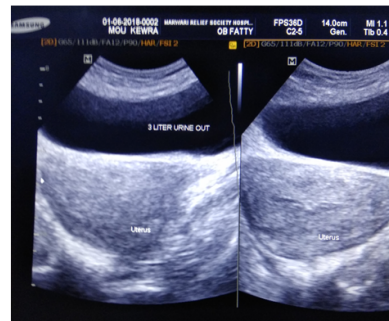


Figure 3: Mass after drainage of 3 litres of urine, Uterus descending to pelvis

Her general condition was normal and stable. There was no symptom of pain, dyspnoea, anorexia, pyrexia, pain, vomiting, restlessness, oedema or haematuria. Her bowel and bladder habits were as usual with intermittent normal voiding of urine without any dysuria. The swelling and abdominal size remained unchanged throughout day and night.

On ultrasound on 01.06.2018, a unilocular cystic mass occupying entire abdomen and pelvis extending from pelvis to xiphisternum having ultrasound volume calculation approx. 3880ml was present.

Involving uterus measuring 9.2x6.5x4.27cms was present in epigastrium supero-posterior to cystic mass having ovaries on lateral side of uterus. Upper abdominal viscera were normal. Any ascites, hydronephrosis or megaureter or megacolon were not identified.

Patient was asked to void 4 times in a span of 2 hours; urine volume was 260ml total after 4 voids; size of mass remained unchanged.

Next day after obtaining consent from patient and her family, a sterile rubber catheter was put in urinary bladder through urethral orifice. Controlled gradual drainage yielded 4150ml of urine accompanied with gradual descent of uterus and ovaries to normal pelvic position. Urine sample was sent for routine and culture examination.

After complete drainage, thickness of bladder wall was 3.5 to 4.6mm without any free fluid in peritoneal cavity.

After 2 days, patient was given 1200 ml of water to drink after complete voiding initially. She was asked to void after 320ml of urine accumulated inside urinary bladder in two hours and 40 minutes.

She voided normally leading to complete evacuation of bladder. Lochia discharge lasted for 22 days.

Patient was followed for more than 4 months, and there was no recurrence of retention of urine. She had normal menstruation after 3 months and 3 days of child birth.

#### DISCUSSION:-

Urinary retention can be either acute painful situation, or chronic retention with less discomfort. Common aetiologies in female are pregnancy with retroverted uterus, puerperium, neuropathy, constipation, cystitis, urethritis, medications [e.g. anticholinergics, antidepressants, cox-2 inhibitors, amphetamines and opiates]. It results in detrusor muscle atrophy or hypertrophy, bladder diverticula or hydronephrosis. None of these were present in patient.

Post-partum urinary retention is defined as the presence of post-void residual urinary bladder volume  $\geq 150$ ml or the inability to void within 6 hours of vaginal delivery [RCOG 2002].

The patient was voiding a good normal volume at repeated intervals like a normal human being. It was unlikely for a benign or malignant unilocular ovarian cystic tumour to surface in a short span of 10 days without any constitutional disturbances. Severe abdominal distension was only complain as if she is carrying another term pregnancy.

Possible risk factors for developing difficulties in passing urine postpartum are epidural analgesia, long labour, prolonged second stage of labour, forceps or ventouse delivery and extensive vaginal lacerations. Postpartum urinary retention has a reported incidence ranging from 1.7% to 17.9%, come across frequently after first vaginal delivery [1].

"Idiopathic Giant atonic bladder (6000 ml in volume) present for 15 years with no urinary symptoms was reported by [3] in a case of 62 year old male with adenocarcinoma of rectum treated repeatedly over long duration.

Maximum volume capacity of female bladder as reported is 1000ml [Magill's Medical Guide Volume III, Englewood Cliffs, N.J.Salem,1998].

Moreover broad ligament and infundibulo-pelvic ligaments retain so much stretch ability so as to ascend to epigastrium carrying uterus and ovaries along with it and also rapidly come down asymptotically even after 13 days of vaginal delivery. Urine sample in question turned out to be normal and sterile on pathological and microbiological examination.

Wall of urinary bladder had normal echogenicity and thickness without any spontaneous rupture. Sudden and massive bladder distension leading to 'Spontaneous rupture' is seen in :

- (i) pelvic infection or inflammation [reported by Falk & Whitman in 1939]
- (ii) obstructed labour [Torpin, 1940]
- (iii) pelvic irradiation [Airman and Horsburgh 1966, & Schein 1986]
- (iv) Neurogenic bladder as in Tabes Dorsalis [Wilson 1940]
- (v) Invasive tumor leading to bladder wall weakness [Stone 1931 & Bastable 1959].

None of the factors above could be found out which could lead to bladder rupture. Not only that, tremendous stretching without any ill effect and remarkable return to normalcy were depicted. Surprising?

#### CONCLUSION:

Postpartum urinary retention after vaginal delivery is a relatively common condition (seen in 81% of cases as per Sebi Cavkaytar, Mahmut Kuntay, Kokandi et al, Journal of Turkish German Gynaecological association,14.07.2014). Such large and huge subacute distension of urinary bladder postpartum without spontaneous rupture of urinary bladder and fantastically rapid return to normalcy is unique in this case. Maximum stretchability of detrusor without hypertrophy and rupture needs to be redefined. Should need arise, broad ligament can also stretch beyond imagination.

#### REFERENCES

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