Pelvic Calcifications
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WHAT IS THAT???

Calcifications in the pelvis can be a bit confusing but let’s take a look at some of the more commonly seen calcifications and some that are often overlooked. I have intentionally missed out phleboliths to get on with the more interesting stuff. This only represents a small number of possibilities and when in doubt, referral for further evaluation is suggested to avoid missing potentially sinister underlying pathology.

Prostate Brachytherapy Seeds

This is a form of radiation therapy for prostate carcinoma. Also referred to as Internal Radiation Therapy or Permanent Low Dose Rate Brachytherapy (LDR). Radioactive iodine-125 or palladium-103 seeds are implanted into the prostate gland under ultrasound guidance. The number of seeds and placement are determined by a computer generated treatment plan that is tailored for each patient. This may be anywhere from 40-100 seeds. The seeds remain in place permanently and become inert after months. This allows a high dose of radiation to be delivered to the prostate with limited surrounding tissue damage.
Fallopian tube calcification (close-up)

Fallopian tube calcification is most often an associated degenerative age related change. Less likely causes include Tuberculosis, Schistosomiasis, Syphilis and may be related to chronic non-specific infection or may be seen with paraplegia.

Prostate Calculi

Prostatic calculi are generally more common with age and are typically seen in men who are evaluated for benign prostatic hyperplasia (BPH) or prostate cancer. In most cases, when symptoms are present, they are usually non-specific. The majority of calculi are discovered incidentally and often produces a diagnostic and therapeutic dilemma.

Bladder Calculus

Bladder calculi are stones of calcified material usually associated with urinary stasis. Although there are a number of conditions and risk factors these are more commonly associated with prostatic enlargement, elevation of the bladder neck and high post void residual urine volume which lead to crystal formation. This ultimately results in an overt calculus. Patients who have static urine and develop urinary tract infections are more likely to form bladder calculi. Patients may be asymptomatic and stones found incidentally on radiographs for other purposes or symptoms may range from abdominal pain to hematuria. Small stones may pass on their own, larger stones need to be removed. If left untreated then may cause infections and other complications.
Penile Prosthetic Implants

It is beyond the scope of this article for lengthy discussion on this topic.

Sacrotuberous Ilgament calcification

This has most often been considered as a normal variant of aging or residual of trauma with no associated symptoms. However, more current literature and studies suggest possible association with pudendal nerve compression syndromes resulting in pain or loss of sensation in the perineal region or compression of the pudendal nerve that can lead to fecal incontinence. It is most commonly seen in males and has not been identified in children or adolescents indicating it is an acquired condition. It is more commonly found unilateral. Some studies have linked this finding with a strong likelihood of spinal DISH although not felt to be a predictor.

Seminal Vesicle Calcification

Seminal vesicle calcification is relatively rare and generally seen in older patients usually as an incidental findings on radiographic or ultrasound studies for other purposes. Presence may indicate the need to assess for underlying metabolic disease such as diabetes mellitus or hyperparathyroidism. Other etiologies have been associated such as chronic uraemia, chronic genitourinary infections (shistosomiasis and tuberculosis), urinary obstruction, carcinoma and metastatic calcification.
13yof – Teratoma

A Teratoma is a germ cell tumor with tissues or organ components that resemble normal tissue derivative and usually of more than one germ layer. The different types of tissue content include hair, muscle and bone. These occur most often in the ovary or testicle and may be found near the sacrococcygeal region in children. Teratoma is considered the most common ovarian neoplasm. They can be benign or malignant thus require referral for evaluation and CT / MRI.

Ureter Stents (yellow arrows) and Filshie clamps (red curved arrows)

Ureteric stent - Thin tube inserted into the ureter to prevent or treat obstruction of the flow of urine from the kidney due to conditions such as kidney stone, tumors, infection or blood clots

Filshie Clip or Clamp – Most common and preferred method for tubal sterilization. Failure rate is approximately 1:500 operations which may be influenced by the surgeon’s experience. Reversal of the procedure is often successful with subsequent conception.

Uterine Leiomyoma

A.k.a uterine fibroid. This is the most common benign pelvic tumor in females of childbearing age, occurring in 20-50% of women over 30 and up to 70% of women by age 50. They are a muscular tumors with varying amounts of fibrous connective tissue that grow in the wall of the uterus. These tumors are hormonal dependent. Majority of women are asymptomatic, others may experience menorrhagia, pelvic pain and infertility. Large fibroids may present with abdominal mass or symptoms secondary to mass effect. These are not typically seen on radiographic images, more often picked up on ultrasound and can be further characterized on MRI. Calcification occurs in approximately 4% of fibroids.
References

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