Percutaneous nephrostomy for bilateral ureteric obstruction in carcinoma of the cervix

A case report

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Summary

A patient with cervical cancer had renal failure secondary to bilateral ureteric obstruction. Percutaneous nephrostomy was performed, allowing restoration of renal function while radiotherapy was administered. This technique offers a temporary means of bypassing obstructed ureters and is associated with low morbidity and minimal surgical risk.

Case report

A 57-year-old black woman, para 10, gravida 10, presented with a history of postmenopausal bleeding. On examination, a large fungating lesion of the cervix was found. Biopsy revealed a moderately differentiated squamous carcinoma of the cervix in stage III B. An excretory urogram revealed obstruction of the lower segments of both ureters with bilateral hydronephrosis (Fig. 1).

These findings were confirmed on renal ultrasonography. Blood urea nitrogen and serum creatinine levels were normal. External radiotherapy was commenced. After 1 week the patient developed anuria and both the blood urea and serum creatinine levels had risen. Bilateral percutaneous nephrostomy was performed under ultrasonographic guidance (Fig. 2). Renal function improved and she began voiding urine spontaneously. A prograde nephrogram at the completion of therapy showed functional kidneys with both ureters patent. The nephrostomy catheters were removed. The patient's renal function remained normal and she had no evidence of recurrent disease after 1 year.

Discussion

The management of ureteric obstruction in advanced carcinoma of the cervix remains controversial and difficult in patients in whom therapy has failed. Untreated patients should however be given the opportunity of receiving radiotherapy, even if cure is unlikely. This entails performing surgical urinary diversion before commencing therapy.

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From the available techniques, we chose to perform bilateral percutaneous nephrostomy under ultrasonographic guidance. This method is preferable because there is a high success rate and it can be performed under local anaesthesia in critically ill patients. Blood loss is minimal and the incidence of infection low. Patient acceptability is high and there are few associated technical problems. Dialysis is avoided and the need for further operative therapy reduced.

Other methods of urinary diversion, including surgical nephrostomy and retrograde ureteric catheterisation, are technically difficult and associated with a high incidence of pyelonephritis and urethral necrosis. There is also the added problem of general anaesthesia and major surgery in very ill patients. Ileal conduit is effective but also involves major
Plasma cholinesterase levels during cardiopulmonary bypass

A report on 10 cases

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Summary

Plasma cholinesterase levels of 10 male patients were determined before, during and after cardiopulmonary bypass surgery. These levels dropped significantly below the pre-anaesthetic values after commencing anaesthesia. In 6 patients levels returned to pre-anaesthetic values before or on the 2nd post-operative day. This could not be explained in terms of enzymic biosynthesis alone, and it is suggested that postoperative fluid readjustments may play an important role in certain cases.

A significant decrease in plasma cholinesterase levels in patients who underwent elective caesarean section under general anaesthesia was reported in 1978. Serum cholinesterase activity is inhibited by several drugs, such as ecotiohpite-iodide eye-drops,2 anti-cancer agents,3 muscle relaxants4 and anaesthetic agents such as ketamine.5 Of the volatile anaesthetic agents it has been suggested that methoxyflurane may result in decreased plasma cholinesterase levels.6 Kaniaris el al.7 measured serum cholinesterase levels in 30 female patients anaesthetised with enflurane for excision of lumps in the breast. They found a temporary decrease of serum cholinesterase levels after enflurane anaesthesia which could not be considered clinically significant (i.e. the enzyme levels remained within normal limits). The exact mechanism of this decrease was unclear, but it could not be attributed to fluoride release from the enflurane, since a similar agent, methoxyflurane, does not depress cholinesterase concentration,6 although its fluoride production potential is much greater.

At present two types of physiologically active cholinesterases, acetylcholinesterase and serum pseudocholinesterase, are recognised. Historically, pseudocholinesterase has been used to assess nutritional status. Milhorat8 first reported that pseudocholinesterase activity in a female with anorexia nervosa varied...