Clinical Notes

Unusual misplacement site of percutaneous silastic central venous catheter in a very low birth weight neonate.

We would like to report on a case of misplaced percutaneous central venous catheter in the pleural space, which has led to acute respiratory distress in a preterm very low birth weight neonate.

This is 1010 gram premature female infant delivered at 28 weeks of gestation. Patient required nasal continuous positive airway pressure for mild respiratory distress. On the third day of life, a percutaneous silastic central venous catheter was inserted through the axillary vein and IVFs were started. X-ray showed the catheter tip overlying the spine with minimal right-sided pneumothorax (Figure 1). Three hours after the percutaneous central venous catheter insertion patient started to deteriorate with respiratory distress. She was intubated and started on mechanical ventilation. A chest tube was inserted on the right side to relieve the pneumothorax (Figure 2). Clear fluid (15 mL) was obtained via the chest tube which was sent for routine analysis. Chest tube was left in situ and for next 12 hours the drainage was noted to be 67 mL. With the suspicion of percutaneous central venous catheter in the pleural space, the percutaneous central venous catheter was removed. Soon after removal of the percutaneous central venous catheter, the chest tube stopped draining. Later pleural fluid was noted to have glucose of 180 mmol/L with protein of 0.6 g/L. RBC was 690 mm$^3$ with WBC of 18 mm$^3$. These findings suggested hydro-pneumothorax rather than just pneumothorax. No organism was seen and gram stain was negative. Serum electrolytes were normal with albumin of 32 g/L. The infants condition improved dramatically after removal of percutaneous central venous catheter and was extubated to room air within three days with no residual pneumo or hydro thorax (Figure 3).

Percutaneous central venous catheters are not free of complications as shown in previous reports. Misplacement into the ascending lumbar vein has been reported previous by Lussky et al. Right-sided hydrothorax, as a complication of percutaneous central venous catheter inserted via antecutal vein, has been reported in three cases. Right-sided hydrothorax has also been reported previously as a complication of umbilical venous catheter. In our case we used the axillary vein for the insertion of percutaneous central venous catheter. The possible mechanism for misplacement can be explained by the proximity of apical pleura to the axilla. The needle may have gone through the vein into the pleural space and the catheter slipped over the needle without any resistance in to the pleural space. The message we got from this case is that exact confirmation of the placement of percutaneous

Figure 1 - Chest X-ray showing right Pneumothorax (Note the course of percutaneous central venous catheter inserted through right axilla).

Figure 2 - Chest X-ray showing resolution of right Pneumothorax (Chest tube in place and percutaneous central venous catheter removed).

Figure 3 - Chest X-ray showing complete resolution (Chest tube removed).
central venous catheter, by using radio-opaque dyes or using radio-opaque catheters, should be mandatory to prevent such complication. Secondly, axillary approach has greater risk as compared to antecebral approach, so should be avoided if possible. Thirdly, never start infusion till the placement of any invasive catheter is confirmed by a radiologist.

Shabih Manzar
Department of Child Health
Sultan Qaboos University Hospital
PO Box 8, Postal Code 123,
Al-Khoud
Sultanate of Oman

References

Chronic granulomatous macrocheilitis due to lupoid leishmaniasis

Inflammation of lip with any cause is named as cheilitis, and may arise as a primary disorder of the vermilion zone, it may extend from the nearby skin or less often, from the oral mucosa.2

Cheilitis is usually induced by adverse environmental conditions, eczematous, infections, ultraviolet radiations and drugs. Leishmanial cheilitis has two types. Among the many acute infectious parasitic causes of macrocheilitis and are trichiniasis and leishmaniasis. Chronic inflammation is seen in Miescher's cheilitis. Herpes simplex is a common cause of infective acute cheilitis that must be ruled out. Inoculation of L tropica into the skin of lip may result in a spectrum of clinical manifestations of acute cheilitis to chronic lupoid type. The acute cheilitis may be due to acute cutaneous leishmaniasis in small self healing lesions and the chronic lupoid type may be due to self regressing lymphadenopathy to complete visceralization. The mechanisms underlying the various tissue tropisms displayed by tropica remain a mystery and we are unable to explain why infection with the leishman organisms resulted in simple adenopathy in Shiraz (a province of Iran) outbreak.1

A 32 year old Iranian Caucas man is referred to central clinic of dermatology in Kerman, a province of Iran, due to chronic swelling of lips from 5 years ago. He gave a history of acute cutaneous leishmaniasis in his chin from 8 years ago, that has been improved during the first 2 years. He was free of skin lesion for the next year, but after this time his lower lip had been inflammed and tumified gradually so that severe macrocheilichtis and eclairbion has appeared (Figure 1). An excision biopsy is carried out for him and the specimen of lip showed organised structures such as granulomatous cheilitis with a rare number of leishman bodies found. Five intralesional injections of long acting corticosteroid in combination with pentavalent antimony (Pentostam) (R) has been administered weekly.

Tumefaction of lower lip reduced gradually after 3 months of this therapy (Figure 2). Nodular lupoid lesions had appeared after 6 months. Twice direct smear and a culture of needle discharge of some nodules in Nicolle Novy-MacNeal (NNN) medium was positive for leptomonal parasite.

Discussion. The essential clinical feature of granulomatous cheilitis in this case is swelling of lips (more in lower lip) one year after healing of acute cutaneous leishmaniasis on his chin. Almost 8 years ago, the diagnosis had been approved by direct smear examination of mid chin lesion. In early phases of any cheilitis the clinical differential diagnosis with angioedema and Melkerson Rosenthal syndrome are considered especially in the absence of either tongue involvement or facial palsy.2 Persistent chronic swelling of the lips, especially one year after completely healing of cutaneous leishmaniasis, should lead us to leishmanial cheilitis rather than other unknown causes of chronic granulomatous cheilitis Kerman is a province of Iran and is an endemic area for Leishmania tropica. Many clinical types of cutaneous and lymphatic leishmaniasis have been seen and reported in this area.1 Sometimes the diagnosis of chronic type can be achieved only by