CASE REPORT

PANCREATIC TRANSECTION DURING KARATE TRAINING

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ABSTRACT

A case report of total transection of the pancreas occurring during karate training is described. The clinical features and delayed diagnosis are discussed.

Key words: Karate, Pancreatic injury.

INTRODUCTION

Isolated pancreatic injury can be difficult to diagnose. In several studies of severe abdominal injury (Graham et al, 1978; Jones, 1978; Northrup and Simmons, 1972) isolated blunt pancreatic trauma was reported in about 5 per cent. Total transection occurred in less than 2 per cent.

Blunt pancreatic injury is often caused by the steering wheel in road traffic accidents (Northrup and Simmons, 1972) and only a few cases due to sports accidents have been described (Vallon et al, 1979). As no previous reports describe a relationship between karate and pancreatic transection it was considered of interest to report the following case.

CASE HISTORY

A 40 year old man, previously healthy, was admitted with abdominal pain. During karate training four hours earlier he had received a blow to the upper abdomen. Physical examination revealed a soft abdomen and no suspicion of an intra-abdominal lesion. Fourteen hours later there was a recrudescence of severe abdominal pain and increase in temperature to 38°C. The serum amylase level was 2429 Unit/L. X-ray of the abdomen, hypoton duodenography and CT scanning were normal. He was observed and given parenteral nutrition. The daily aspirate from nasogastric suction was 2 litres.

After 10 days a palpable mass was noticed in the upper abdomen and a CT scan demonstrated a cystic mass close to the gallbladder. The nature of the cyst was not obvious for which reason an explorative laparotomy was performed and a large retroperitoneal cyst was revealed. No visible lesion was found in the pancreas or other organs and the cyst was drained of 800 ml of serous liquid. Post-operatively there was continuous secretion from the drain and after 15 weeks endoscopic retrograde pancreatography (ERCP) was carried out demonstrating a total transection of the pancreas just to the right of the spine (Fig. 1).

At repeat exploration the distal transected pancreas was removed and the post-operative period was without complications.

Fig. 1: Total transection of the pancreas during karate training.

DISCUSSION

Signs and symptoms in isolated blunt pancreatic trauma may be delayed or absent (Northrup and Simmons, 1972; Vallon et al, 1979). However the morbidity is considerable with complications in up to 60 per cent of cases (Graham et al, 1978; Jones, 1978; Northrup and Simmons, 1972; White and Benfield, 1972). The most frequent complications are pseudocysts (2-30%), pancreatic fistula (3-30%), pancreatic abscess (8-34%) and pancreatitis (1%). Endocrine dysfunction is rare. The mortality in isolated blunt pancreatic injuries is 2 per cent.

Normal serum amylase has been reported in the presence of total transection of the pancreas (White and Benfield, 1972). In retrospect the elevated serum amylase should have given rise to the suspicion of pancreatic injury. In the above case ultrasonography and CT scan did not demonstrate the total transection and there were no signs of abdominal pathology before development of the palpable mass. Furthermore a transection or other pancreatic lesion was not detected at the first laparotomy which was why only drainage was performed, it not being evident that the swelling was a pseudocyst. This treatment is well established (Robey et al, 1982) but an early demonstration of the transection would have been highly desirable.

ERCP can demonstrate the exact transection in the duct

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system (Taxier and Sivak, 1980) and therefore ERCP must be performed together with ultrasonography and/or CT scanning when there is suspicion of a pancreatic lesion and such lesions must be suspected in every case of blunt abdominal trauma, including those sustained in karate.

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