Of the remaining 216, all have been followed up for twenty years, in the sense that we have good evidence whether they are alive or dead.

The results are summarised in the table. These in general confirm the results from the Rhondda Fach in that the survival rates of those with simple pneumoconiosis are similar to those with category 0 for both all miners and ex-miners and those not exposed to other industrial respiratory hazards—in particular, exposure to cotton dust. The numbers in the latter group are much smaller but show exactly the same trend. There are two other points of interest. Firstly, the similarity between the survival rates of the non-miners and those miners and ex-miners with categories 0, 1, 2, and 3 (this is very different from the findings in the Rhondda Fach,¹ where the survival rates of those with these categories were considerably lower than those of the non-miners in this age group). Secondly, the survival rates of the non-miners and all miners and ex-miners, including those with progressive massive fibrosis (Categories A, B, and C), are reasonably comparable.

Discussion

Although the numbers are relatively small and confined to one age group, they represent the results of a 100% follow-up. In general, they confirm the findings in the Rhondda Fach that miners and ex-miners with simple pneumoconiosis survive as well as those with category 0. It must, however, be remembered that we are ignorant how the miners were selected from the general population, and how selective and how large the migration of ex-miners out of this area has been, before the survey took place. It must also be emphasised that mortality is not necessarily associated with disability.

The similarity between the survival rates of non-miners and miners and ex-miners with category 0, in contrast to the findings in the Rhondda Fach,¹ is striking. This highlights the importance of survival studies on a local basis in order to have a comparison group. Finally, the fact that all miners and ex-miners, including those with all categories of pneumoconiosis, survive in this age group nearly as well as the average of the population is of interest.

We are deeply indebted to Dr P H N Wood and the Arthritis Research Council's field team, who successfully traced the members of the random sample, and to Dr Ross Ullman who helped us trace one man who had emigrated to Australia.

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(Accepted 26 October 1977)

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Unilateral short thumb associated with bleeding duodenal reduplication

Intraluminal duodenal reduplications are uncommon and often undiagnosed during life.¹ They take the form of protrusions of the duodenal wall, usually into the curve of the second part, and often cause problems due to obstruction of the lower end of the common bile duct or of the duodenal lumen itself.² In some cases associated congenital abnormalities have been present.³ We report a patient who presented with massive bleeding and at operation was found to have the ampulla of Vater embedded in its wall. The patient was noted to have a unilateral short thumb.

Case report

A 41-year-old woman designer was admitted to a hospital in 1974 with a history of melaena for several days. The results of investigations including barium meal, barium enema, and endoscopy were negative. She was discharged in good health after a blood transfusion of 6 units. Two years later she again had melaena and a haemoglobin of 4.8 g/dl. Transfusion with 9 units of blood restored the haemoglobin to 12 g/dl. She had no history of having taken any drug or material which might have precipitated the bleeding, nor was there any history or family history relating to a bleeding diathesis. She had always been completely healthy and symptom free.

Systemic examination showed no abnormalities and rectal examination

confirmed the presence of melaena. Her blood pressure was 120/70 and the pulse rate 88 per minute in sinus rhythm. The distal phalanx of her right thumb was however noted to be extremely short. Barium meal again showed no abnormality, although the appearances at endoscopy suggested the presence of blood beyond the second part of the duodenum. The steady fall in her haemoglobin concentration over the next 72 hours suggested a steady ooze of blood. Selective mesenteric angiography was then performed but no abnormality identified.

At laparotomy both the large and small bowel were full of blood with no specific lesions identifiable. Segmental clamping afforded no further help but on advancing the nasogastric tube through the pylorus into the second part of the duodenum bright red blood was aspirated. A longitudinal duodenotomy was then performed and a cystic duplication of the duodenum demonstrated. This was wind-sock shaped and had numerous fenestrations in its wall, some of which were oozing blood. Excision of the reduplication was performed with care since it had been demonstrated that the common bile duct was opening into its wall (figure). The duct was carefully preserved and reimplanted into the normal duodenal wall. The patient's recovery was uneventful, and two years later she is well with no further evidence of bleeding.

Diagram of cystic reduplication of second part of duodenum with common bile duct opening into it. Fenestrations which were bleeding are indicated by small arrows.

Comment

Duodenal reduplications usually present with symptoms of upper gastrointestinal obstruction or of biliary obstruction. In rare instances they may produce pancreatitis⁴ or even perforate.⁵ It is extremely unusual for them to present with massive bleeding, though when this does occur it usually is superimposed on a long history of upper gastrointestinal symptomatology. In these cases pathological examination of the wall shows evidence of ulceration and occasionally even heterotopic gastric mucosa. The condition is probably congenital and as might be expected the existence of many congenital skeletal and cardiac abnormalities (arachnodactyly, vertebral anomalies, talipes equinus varus, atrial septal defect, and ventricular septal defect) has been recorded in association with duodenal reduplications.³ The identification of one such in a patient with upper gastrointestinal symptoms and more especially unexplained bleeding might provide a valuable diagnostic clue.

A clinical marker of a potential duodenal lesion would be extremely helpful for the surgeon, since an unidentified bleeding source in a patient whose whole bowel is full of blood poses a major problem. At the operation itself the additional relevant feature is the fairly common relationship of the reduplication to the common bile duct which should be carefully identified and preserved.

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(Accepted 26 October 1977)

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