The failure of the distal colonic smooth muscle to relax would prevent co-ordinated peristalsis and produce a functional obstruction. Our findings of an immature enteric plexus which was most marked in the left colon and rectum supports this idea.

A possible role for the vagus has been suggested, because the site of transition between the vagus and sacral parasympathetic supply is in the distal transverse colon[4,5].

The clinical course of SLCS varies in severity from mild symptoms, relieved by enema, to severe obstruction associated with colonic perforation. Several factors appear to be involved including drug, metabolic and hormonal disturbances, but the most important factor may be the degree of immaturity of the enteric neurons in the distal hindgut.

Acknowledgment: N D Heaton was supported by a King's Medical Research Trust Grant.

References

1 Davis WS, Allen RP, Favara BS, Slovis TL. Neonatal small left colon syndrome. *Am J Roentgenol* 1974;120:322-9
2 Clatworthy HW, Howard WHR, Lloyd J. The meconium plug syndrome. *Surgery* 1956;32:131-42
3 Davis WS, Campbell JB. Neonatal small left colon syndrome. *Am J Dis Child* 1975;129:1024-7
4 Stewart DR, Nixon GW, Johnson DG, Condon VR. Neonatal small left colon syndrome. *Ann Surg* 1977;186:741-5
5 Philippart AI, Reed JO, Georgeson KE. Neonatal small left colon syndrome: intramural not intraluminal obstruction. *J Pediatr Surg* 1975;10:733-40
6 Ellis DG. Clatworthy HW. The meconium plug syndrome revisited. *J Pediatr Surg* 1966;1:54-61
7 Bughaighis AG, Emery JL. Functional obstruction of the intestine due to neurological immaturity. *Prog Pediatr Surg* 1971;3:37-51
8 Le Quesne G, Reilly B. Functional immaturity of the large bowel in the newborn infant. *Radiol Clin North Am* 1975;13:3311-42
9 Amodio J, Berdon W, Abramson S, Stolar C. Microcolon of prematurity: a form of functional obstruction. *Am J Roentgenol* 1986;146:239-44

(Accepted 14 August 1990)

Thoracic endoscopic sympathectomy for palmar hyperhidrosis in an adolescent female

S P Salob MD[1] **D J Atherton** FRCP[1]
E M Kiely FRCS[2] *Departments of [1]Dermatology and [2]Surgery, The Hospital for Sick Children, Great Ormond Street, London WC1N*

Keywords: endoscopic sympathectomy; sympathectomy; hyperhidrosis

Case presented to Section of Dermatology, 17 May 1990

Although patients with excessive sweating of the palms frequently do not seek medical advice until they are adults, the symptoms generally first appear in childhood and by adolescence may already be a major problem[1-3]. The discomfort and embarrassment caused by the condition can be disabling, interfering with the patient's normal daily activities, social life and schoolwork[2,3]. Even though eccrine sweat glands are widely distributed, symptomatic hyperhidrosis is usually confined to the hands, feet, and/or axillae[4].

Although non-surgical treatments may help some patients with palmar hyperhidrosis, they may not benefit individuals who are severely affected. Sympathectomy has been performed effectively for palmar hyperhidrosis for many years[1]. The procedure involves the removal of the second to the fifth sympathetic ganglia, thus disrupting the cholinergic sympathetic nerves to the eccrine sweat glands of the upper limb[3]. Traditional thoracic sympathectomy techniques include (i) an upper dorsal approach in which one to two ribs on each side are resected, leaving the patient with unsightly scars, (ii) an axillary approach, which may be complicated by operative injury to the brachial plexus, and (iii) a supraclavicular approach, which involves deep exploration through vital neck structures[5]. The endoscopic approach[6] described below allows good visualization of the second to the fifth sympathetic ganglia, is relatively simple to perform, and involves less time in hospital, less postoperative pain and scarring, and fewer complications.

Case report

A 17-year old female first presented at the age of 13 with a history of profuse sweating of the hands and feet since early childhood, associated with swelling of the fingers. Later in childhood, she developed axillary hyperhidrosis. She also suffered from Raynaud's phenomenon. The sweating was at times so profuse that sweat would literally drip from the hands, causing her considerable embarrassment. She found it difficult to hold a pen and, because sweat caused smearing of the ink on the page, she was often reprimanded for apparently sloppy schoolwork.

The patient was initially treated for one month, unsuccessfully, with oral propanol and nifedipine. She improved somewhat on the oral anticholinergic, glycopyrronium bromide (Robinul) 4 mg three times a day, which she took from 11 to 15 years, and to a lesser extent on propantheline bromide (Pro-Banthine) 45 mg three times a day, which she used when glycopyrronium bromide was withdrawn from the market in 1988. However, the high doses required to achieve any reduction of the hyperhidrosis caused the unpleasant side effects of dry mouth and eyes, and difficulty focusing, which also affected her schoolwork.

As conventional therapy was not satisfactory in controlling her hyperhidrosis, in the spring of 1990 she underwent bilateral endoscopic thoracic sympathectomy. A pneumothorax was produced by introducing 1.5 litres of carbon dioxide via a small incision in the anterior axillary line. A standard laparoscope was inserted, and the second to fifth sympathetic ganglia were coagulated using a diathermy probe introduced through a second small incision. As a result, her hands and axillae now remain warm and dry, although a degree of compensatory sweating of her trunk and back has developed.

Discussion

Seven patients who underwent endoscopic sympathectomy were reviewed by Malone[7], who found that only two had immediate complications: a pneumothorax in one patient required chest drainage for 24 h, and a mild Horner's syndrome in the second cleared within 48 h. Dense pleural adhesions had unexpectedly been encountered intraoperatively in the patient who developed a pneumothorax.

Kux[5] reviewed 59 patients, 6-40 months postoperatively, and found that although all the patients no longer had palmar sweating, about 20% had some recurrence of their

0141-0768/91/020114-02/$02.00/0

axillary perspiration. Half the patients reported compensatory sweating, mainly on the trunk, abdomen, and thighs, as in our patient. Two patients complained of sweating of the face elicited by the taste or smell of food. No patients developed a permanent Horner's syndrome, which has been reported as a long-term complication in up to 20% of patients undergoing upper dorsal sympathectomy[8]. Fifty-five of the 59 patients in the Kux study reported that they were highly satisfied with the results of the procedure.

Endoscopic sympathectomy is well tolerated, carries a low morbidity, and appears to be the operative procedure of choice for patients with severe palmar hyperhidrosis.

References

1 Adar R, Kurchin A, Zweig A, Mozes M. Palmar hyperhidrosis and its surgical treatment. *Ann Surg* 1977;**186**:37-41

2 Law NH, Ellis H. Transthoracic sympathectomy for palmar hyperhidrosis in children under 16 years of age. *Ann R Coll Surg Engl* 1989;**71**:70-1

3 O'Donoghue G, Finn D, Brady MP. Palmar primary hyperhidrosis in children. *J Pediatr Surg* 1980;**15**:172-4

4 Greenhalgh RM, Rosengarten DS, Martin P. Role of sympathectomy for hyperhidrosis. *BMJ* 1971;i:332-4

5 Kux M. Thoracic endoscopic sympathectomy in palmar and axillary hyperhidrosis. *Arch Surg* 1978;**113**:264-6

6 Malone PS, Cameron AEP, Rennie JA. The surgical treatment of upper limb hyperhidrosis. *Br J Dermatol* 1986;**115**: 81-4

7 Malone PS, Cameron AEP, Rennie JA. Endoscopic thoracic sympathectomy in the treatment of upper limb hyperhidrosis. *Ann R Coll Surg Engl* 1986;**68**:93-4

8 Bass A, Inovrotzlavski S, Adar R. Upper dorsal sympathectomy for palmar hyperhidrosis. *Isr J Med Sci* 1983;**19**:112-15

(Accepted 6 September 1990)

Envenomation by the box-jellyfish - an unusual cause of ulnar nerve palsy

J H E Laing BSc FRCS **D H Harrison** FRCS
Regional Centre for Plastic, Maxillo-facial and Oral Surgery, Mount Vernon Hospital, Northwood, Middlesex HA6 2RN

Keywords: jellyfish; envenomation; neurotoxicity

Case presented to Section of Plastic Surgery, 12 June 1990

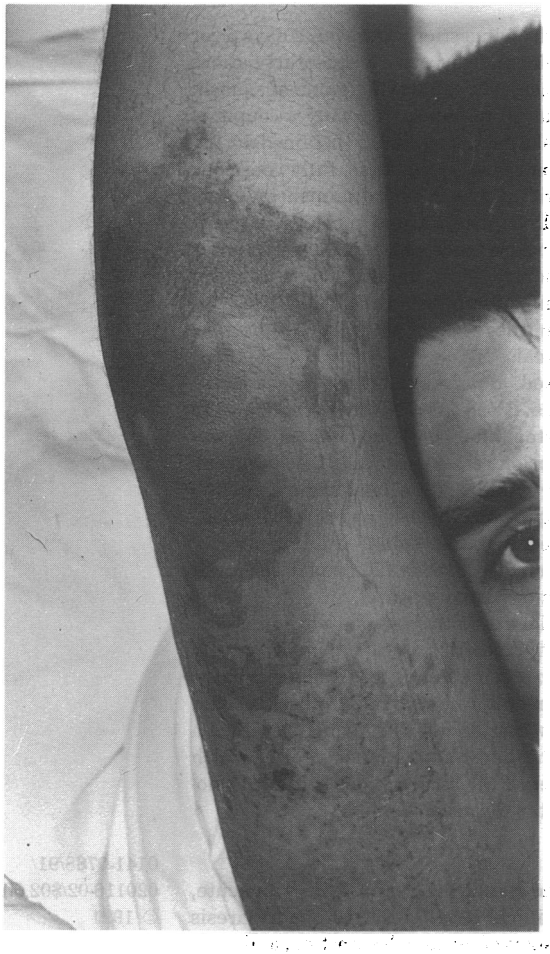

Figure 1. Skin changes over the right elbow, following envenomation by Chironex fleckeri, *10 days previously*

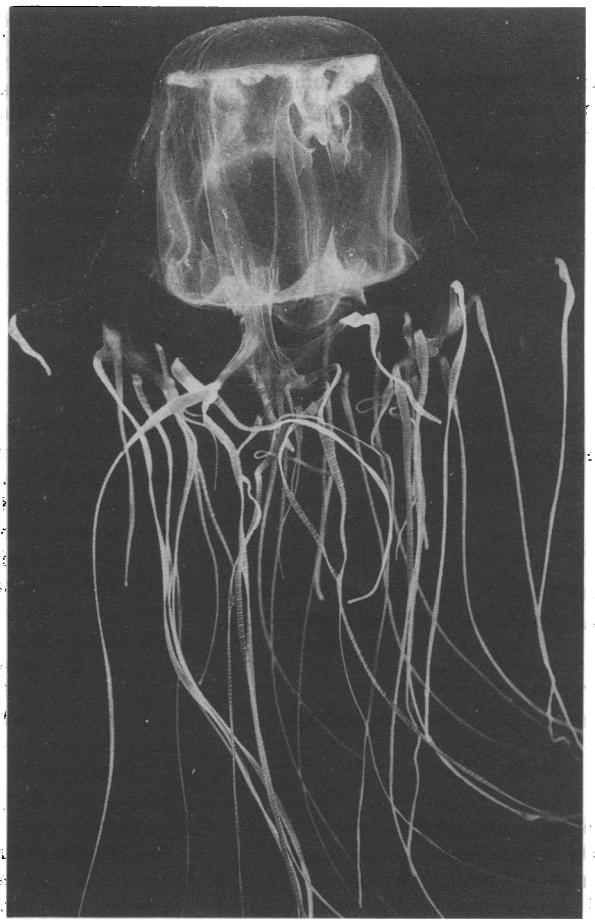

Figure 2. Chironex fleckeri *(box-jellyfish)*

Whilst systemic neurotoxicity is not uncommon following envenomation by the box-jellyfish, the isolated involvement of a single peripheral nerve has not been previously described, despite the frequency with which jellyfish stings occur worldwide. We describe such a case.

Case report

A 21-year-old British student was on a hockey tour in Thailand. Whilst swimming backstroke in the sea off Phuket he experienced sudden burning pain across his back and right arm. On return to the shore he developed wheezing and generalized oedema, and was noted to have livid wheals on his back and elbow. These subsequently developed the classical ladder-rung pattern of *Chironex fleckeri* (box-jellyfish) stings[1].

0141-0768/91/020115-02/$02.00/0