

# Dysphagia in Behçet's syndrome

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The association of dysphagia and Behçet's syndrome is described. Care has been taken to establish the exact cause for the dysphagia, and autonomic nervous system abnormalities were demonstrated. The local condition appears to be similar to but not identical with achalasia. In view of this similarity a Heller's myotomy was performed with a satisfactory result.

In 1937, Behçet, a Turkish dermatologist, described a clinical entity characterized by ulceration affecting the mouth and genitals together with severe iritis. This classical triad also goes under the name of the 'triple symptom complex'. The manifestations are episodic, the history extending over several years, and at any one time during an exacerbation of the illness there may be only one symptom of the triad present. In subsequent years, in addition to the three features described by Behçet, the involvement of other systems has been described. Bøe, Dalgaard, and Scott (1958) and Ramsay (1967) reported in patients with the oral ulceration of Behçet's syndrome similar ulceration affecting other parts of the gastrointestinal tract. Mason and Barnes (1968), Oshima, Shimizu, Yokohari, Matsumoto, Kano, Kagami, and Nagaya (1963), and Strachan and Wigzell (1963) found joint manifestations in the form of a spontaneously resolving polyarthritis. Involvement of the lungs (Decroix, 1969), major and peripheral blood vessels (Hills, 1967; Pallis and Fudge, 1956; Mowat and Hothersall, 1969; Mamo and Baghdassarian, 1964), and also of the central nervous system (Kawakita, Nishimura, Satoh, and Shibata, 1967; Fowler, Humpston, Nussey, and Small, 1968; Pallis and Fudge, 1956) may be present. Because of the various presentations described above, Berlin (1960) suggested that the disease should no longer be called the 'triple symptom complex' and put forward the alternative of 'Behçet's multiple symptom complex'. Mason and Barnes (1968) consider that the symptom complex may be present in a complete or incomplete form; in the former, the oral and genital manifestations are combined with the ophthalmological lesions;

whereas in the latter any one of the three symptoms may be absent, and Curth (1946) emphasizes that whenever two of the originally described symptoms are present this is sufficient evidence for the diagnosis to be made. The aetiology of the disease is still obscure; Behçet postulated a viral aetiology and this belief is to some extent supported by the investigations of Sezer (1953, 1956). Oshima *et al.* (1963) believed that an autoimmune mechanism may be the underlying pathogenesis of the illness. A familial incidence has also been described (Sezer, 1956; Mason and Barnes, 1968; and Fowler *et al.*, 1968). In our department we have recently had the opportunity to observe a patient with Behçet's syndrome who manifested the additional feature of dysphagia which has not previously been described.

## CASE REPORT

A 32-year-old man was admitted on 6 May, 1970, to the Queen Elizabeth Hospital, Birmingham, with a long history of dysphagia.

He had for the last six years experienced intermittent difficulty in swallowing solid foods and this had progressively worsened during the last 18 months until at the time of his admission he had dysphagia with liquids. Eight years previously he developed, for the first time, ulceration of the mouth, hands, feet, and genitalia together with conjunctivitis. Since that time recurrence of the lesions at one or all the sites had occurred from time to time, supporting the diagnosis of Behçet's syndrome. One of the patient's two offspring, a daughter aged 6, has had recurrent oral ulceration.

At the time of his admission his systemic examination was normal and he exhibited no manifestations of his basic disease.

INVESTIGATIONS Haemoglobin 16 g%; white blood count 13,000/mm<sup>3</sup>; E.S.R. 9 mm in 1st hour; albu-

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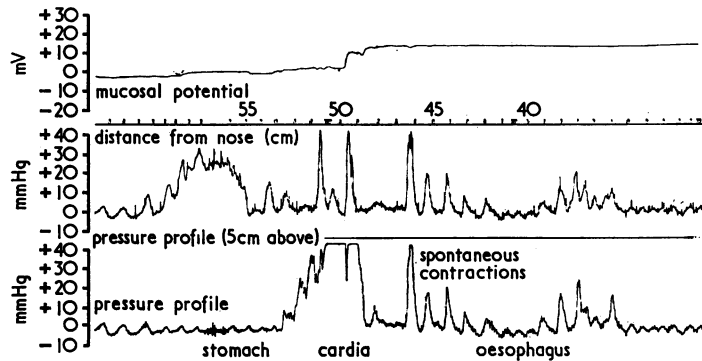


FIG. 1. Recordings of transmucosal potential and resting pressure profiles with withdrawal of transnasal catheters from stomach into gullet. Distances marked correspond to transmucosal potential of upper panel and pressure profile of lowest panel. Note abnormally high pressure at cardia, which is more than 40 mmHg; and spontaneous contractions in gullet.

min 5.6 g%; globulin 3.1 g%; quantitative immunoglobulin levels were within the normal range. Wassermann reaction: negative. Cerebral spinal fluid: chemistry and cytology normal.

**Barium swallow and screening** The first peristaltic wave appeared in the upper oesophagus after 20 seconds and progressed no further than the aortic arch. No emptying of the oesophagus had occurred at 90 seconds when the examination was made in the horizontal position. Peristaltic activity was poor throughout the oesophagus and there were tertiary contractions occurring mainly in the lower segment. It was noted that some emptying of the oesophagus occurred in expiration (this had in fact been noticed by the patient as a means to overcome his dysphagia). No gastro-oesophageal reflux was demonstrated. The oesophagus was not dilated or lengthened. A gas bubble was present in the stomach. These last three features are unlike achalasia.

**Oesophagoscopy** The oesophagus appeared slightly dilated with minimal fluid retention and no food residue. The mucosa was normal. This also was unlike the findings in achalasia.

**Oesophageal manometric studies** Using the technique described by Woodward (1970), two transnasal catheters of internal diameter 1.4 mm and with lateral holes were passed into the stomach. These were constantly infused with water at the rate of 7 ml/sec. The proximal ends of the catheters were connected to pressure transducers. The transnasal catheters were then gradually withdrawn from the stomach, through the lower sphincter and into the gullet, and a resting pressure profile was recorded. The withdrawal was made at the rate of 10 cm/min with recordings made at each centimetre, as marked in Fig. 1, line 1.

These studies showed a non-relaxing lower oesophageal sphincter having an end expiratory pressure in excess of 35 mmHg (average for normal 7–25 mmHg).

The oesophagus showed spontaneous contractions at various levels, which were repetitive and undulating. Swallowing initiated synchronous, non-sequential, and non-propulsive contractions in the gullet instead of the normal peristalsis.

The conclusion drawn from this was that the motility of the oesophagus was abnormal. The pattern demonstrated was similar to that found in achalasia but the findings were of a non-specific type.

**Mecholyt test** This showed a hypersensitive response (Fig. 2). The lower oesophageal sphincteric pressure rose more than 40 mmHg following an intramuscular injection of 12 mg methacholine (Mecholyt). The patient also complained of substernal pain at this time, the pain subsiding when pressure in the lower oesophageal sphincter returned to the previous level.

In a normal subject, following an injection of a parasympathomimetic agent, no such hypersensitive response is seen. Cannon's law of denervation states 'when in a series of efferent neurones, a unit is destroyed, an increased irritability to chemical agents develops in the isolated structure or structures, the effect being maximal in the part directly denervated' (Cannon and Rosenblueth, 1949).

In the light of the above law, our finding of a hypersensitive response of the lower oesophageal sphincter suggests that there is no motor abnormality of the smooth muscle of the lower gullet per se, but that there is denervation of the parasympathetic (vagal) supply of the part.

As the above findings strongly suggested that the oesophagus was behaving in the same way as in achalasia a Heller's myotomy was carried out on 15

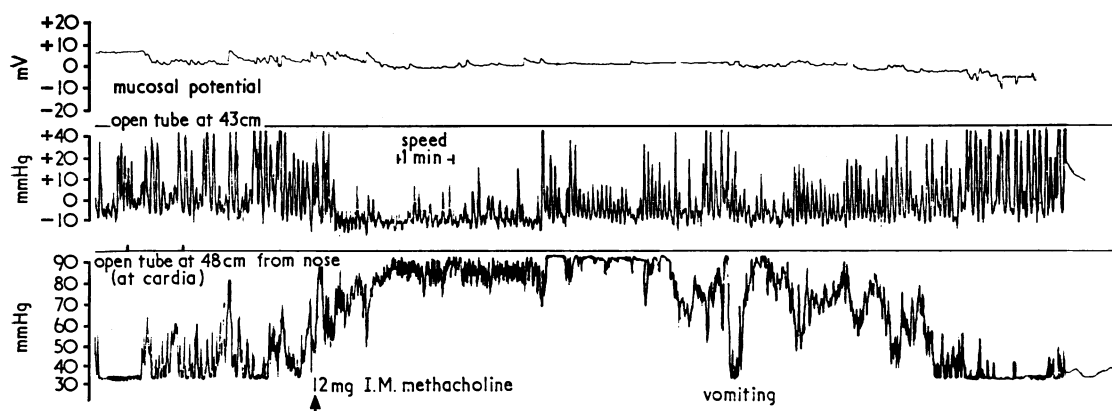


FIG. 2. Simultaneous pressure recordings with two transnasal catheters, one placed at cardia and the other in gullet 5 cm above cardia. Lower panel shows pressure recordings at cardia, and upper panel shows pressure recordings in gullet. Note effect of methacholine (Mecholyl) on both pressure recordings. Pressure in lower panel (cardia) rose from 40 mmHg within 90 seconds of injection of methacholine, and there was no such rise in upper panel (oesophagus). High cardiac pressure in lower panel returned to previous level of 40 mmHg as effect of injection of methacholine subsided gradually.

May 1970 using an abdominal approach. In addition the two halves of the right crus of the hiatus were approximated in a manner similar to that described by Collis (1961) for a hiatal hernia repair. At this operation it was noted that there was an absence of the hypertrophy normally found in the longitudinal muscle in achalasia. Histology of a lower oesophageal muscle biopsy, taken at the time of the lower oesophageal myotomy, revealed nerve bundles of Auerbach's plexus but no ganglion cells. Barium swallow and screening two weeks postoperatively showed normal passage of the contrast medium. At review 10 weeks postoperatively the patient showed an exacerbation of his basic disease in the form of ulceration of the mouth, hands, and genitalia but he had no dysphagia. These clinical findings suggest that nervous changes had produced a clinical state functionally similar to, but not identical with, achalasia. This seemed important as it might otherwise have been contended that a chance association between achalasia and Behçet's syndrome was being observed.

#### DISCUSSION

The recurring nature and the sites of ulceration fulfilled the criteria as suggested by Curth (1946) for a diagnosis of Behçet's syndrome to be made although at no time was an iritis present. In order to include the additional feature of dysphagia as being part of the Behçet's syndrome, we feel that it must be produced by similar neural pathology as the neurological form of the disease. Histological section of the oesophageal muscle removed

at the time of operation in our case revealed an absence of ganglion cells. Cassella, Brown, Sayre, and Ellis (1964) emphasized, as is well known, that this is a normal finding in achalasia of the cardia, but in addition they describe in patients with achalasia histological changes and a reduction in the number of nerve cell bodies in the dorsal motor nucleus of the vagus nerve in the brain stem. Experimental work of Sato, Tanaka, Kazawa, and Inami (1965) has shown that the mechanism of achalasia probably has its origin in the central nervous system. Pallis and Fudge (1956) identified the involvement of the nervous system in Behçet's syndrome in the following patterns: brain stem syndrome, meningomyelitic syndrome, and organic confusional syndrome. Histologically the cases of neuro-Behçet's syndrome show a widely varying picture. An extensive study of these changes carried out by Kawakita *et al.* (1967) confirmed the multiplicity of the histological picture but in several instances they showed small areas of softening, mainly in the brain stem with degenerative changes and chromatolysis of the nerve cell bodies.

In view of these factors we believe that this patient's dysphagia was the result of focal degenerative changes probably in the brain stem affecting in some way the vagus supply of the oesophagus, all being part of the Behçet's syndrome.

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