SHORT REPORTS

Lymphangitis after tuberculin tests

Lymphangitis after tuberculin testing has rarely been reported. I report 12 such reactions seen during 1979-83, five after Mantoux and seven after Heaf tests. I had not seen any in the previous 39 years.

Case reports

An Indian patient aged 21 presented on 1 May 1979 with cough and sputum after influenza. Clinically his chest was clear, but radiography showed an 8 mm round focus in the second left interspace and tiny right apical fibrotic scars. He had a small pigmented scar in the left posterior triangle of the neck marking the removal of a lymph node three years previously; it was not examined histologically. No family or contact history of tuberculosis was elicited. A Mantoux test with 0.1 ml of 1 in 1000 tuberculin purified protein derivative (10 IU) was done on the left forearm. Later that day he suffered faintness, shivering, vomiting, and fever (40°C). After three days the test site showed erythema (5×6 cm) and induration (4×5 cm) with central blistering. Two red lines extended upwards from the top of the lesion (figure).

Site of Mantoux test showing erythema, induration, and lymphangitis indicated by lines extending from top of lesion.

In three weeks a large scab had formed; subsequently the site of the blister remained pink.

From October 1979 to October 1980, of 47 staff who underwent Mantoux testing in the occupational health department of one hospital, four developed lymphangitis. Three had been injected with 10 IU tuberculin purified protein derivative and one with 5 IU. Two subjects complained of malaise and one also felt febrile. Chest radiographs showed no abnormalities. Ages varied from 45 to 55.

From July to October 1983 a health visitor performed 371 Heaf tests in three other hospitals after the discovery of two cases of culture positive pulmonary tuberculosis. Seven of the subjects developed lymphangitis together with grade IV reactions, six reported malaise, and three reported nausea, muscle ache, and fever. Their ages ranged from 35 to 56. Chest radiographs of those with severe reactions showed no evidence of active tuberculosis but five showed fibrotic scars with calcification in three. All those with severe reactions were white.

Comment

I have found only two other case reports of this reaction, one after a Tine test, which the author described as very rare,¹ and one after a Heaf test.² Nevertheless, colleagues report having seen lymphangitis

after Tine testing in three tuberculous contacts, and after Mantoux testing in one tuberculous patient, and one colleague had himself suffered lymphangitis and lymphadenitis with malaise and fever after Heaf testing. Severe reactions to Heaf tests (including one case of lymphangitis) occurred in some schoolboys who had been vaccinated five years previously with BCG (C L Miller, personal communication, 1984).

In recent years increasingly severe reactions to Mantoux tests with 10 IU have been reported at case conferences; initial doses of 5 IU, or even 1 IU if the index of suspicion is high are now common. In 1979 severe reactions to the Mantoux test were reported to the suppliers, but tests on guinea pigs found no change in the potency of the tuberculin. A report has described the Heaf test as convenient for use on hospital staff but stated that the Mantoux test may be used, although the dose was not specified.³ Some figures suggest that the strength of tuberculin used in Heaf tests may vary from 10 to 50 IU,¹ though the late Professor Heaf told me that he regarded his test as equivalent to 15 IU (personal communication, 1952). Use of the Mantoux test instead of the Heaf test whenever possible may avoid some of these severe reactions. This would also avoid the persistent puncture marks at the site of the Heaf test, to which some subjects object.

I am indebted to Dr A J Hands of the occupational health department at Ormskirk and District General Hospital and to Dr P W Lang, district medical officer for Southport, for access to records.

¹ Caplin M. *The tuberculin test in clinical practice*. London: Baillière Tindall, 1980: 24, 42.

² James DG, Studdy PH. *Colour atlas of respiratory disease*. London: Wolfe Medical Publications, 1981:108.

³ Joint tuberculosis committee of the British Thoracic Society. Control and prevention of tuberculosis: a code of practice. *Br Med J* 1983;287:1118.

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Availability of non-steroidal anti-inflammatory drugs over the counter: information needed

During the period in which a number of non-steroidal anti-inflammatory drugs have been withdrawn because of adverse effects,¹ others have been available over the counter without prescription. Duplication of treatment may ensue if details of the availability of drugs over the counter are not known. To assess whether there is a problem a group of doctors was sent a standard questionnaire.

Methods and results

We asked 140 rheumatologists what non-steroidal anti-inflammatory drugs were available over the counter; 93 returned the questionnaires.

Most were aware that naproxen (89.2%), diclofenac (86%), and indomethacin (92.4%) were not available over the counter and that ibuprofen (96.5%) was. Only 25.8% recognised that benorylate was available over the counter. The table shows how many knew the content and availability of some over the counter formulations. Only 43 (46.2%) asked their patients what preparations they took that they had obtained over the counter. Eighty eight (94.6%) thought that the profession should be better informed of the availability of drugs over the counter.

Comment

Higham and Jayson showed that 79% of patients with rheumatoid arthritis or back pain used self prescribed analgesics.² Although there is

a case for safe non-steroidal anti-inflammatory or analgesic drugs being available over the counter, the medical profession should be aware of them. Doctors prescribe assuming that treatment will not be duplicated and that potential toxicity and inappropriate combinations of drugs will be avoided.

No (%) of correct answers from 93 questionnaires

Proprietary names	Contents	Recognised as being available over the counter	Contents known
Triadol	Benorylate	16 (17.2)	13 (14.0)
Nurofen	Ibuprofen	61 (65.6)	57 (61.2)
Proflex	Ibuprofen	26 (28.0)	6 (6.5)
Maxagesic	Ibuprofen	8 (8.6)	2 (2.2)
Phensic	Aspirin	93 (100)	66 (71.0)

We sought the views of rheumatologists because they often prescribe non-steroidal anti-inflammatory drugs. Most were not aware that benorylate is available over the counter. Only Nurofen and Phensic were recognised as being available without prescription, possibly because they have been advertised widely. Preparations of paracetamol and aspirin have been available over the counter longer and can produce problems if doctors are unaware that they are being taken. Lack of awareness is compounded by the multiplicity of brand names under which these drugs are marketed. Although the use of alternative brand names allows public promotion without incurring the wrath of the medical profession, it does lead to potential duplicate prescribing. None of the usual texts used by clinicians lists these preparations.

If the trend is to make more non-steroidal anti-inflammatory and other drugs available over the counter, the medical profession should be aware of this. Inclusion of such drugs in the usual reference texts, such as *Monthly Index of Medical Specialties (MIMS)*, *British National Formulary*, and *Data Sheet Compendium* would help rational prescribing.

¹ Anonymous. Non-steroidal anti-inflammatory drugs: have we been spoilt for choice? [Editorial.] *Lancet* 1984;ii:141-2.

² Higham C, Jayson MIV. Non-prescribed treatments in rheumatic patients. *Ann Rheum Dis* 1982;41:203.

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Formed visual hallucinations with pituitary adenomas

Visual hallucinations were first reported in patients with pituitary adenomas in 1940.¹ Nevertheless, these are thought to be rare² and none were found in 260 patients with pituitary adenomas examined specifically for neuro-ophthalmological abnormality.³ We report three patients with proved chromophobe adenomas in whom formed visual hallucinations were prominent symptoms.

Case reports

Case 1—A 54 year old man presented in 1978 with two years' worsening vision. For three months each evening plastic water filled bags in the shape of human faces had appeared in his temporal visual fields, floated away, and vanished. They were suppressed by thioridazine. He showed clinical hypopituitarism, bitemporal hemianopia, and left optic atrophy. Visual acuity was 6/9 (right) and 6/12 (left). Computed tomography showed a 3.5 cm pituitary tumour with suprasellar extension deforming the third ventricle. The 9 am cortisol value was 80 nmol/l (2.9 µg/100 ml) (normal 170-760 (6.2-27.6 µg/100 ml)), thyroxine 67 nmol/l (5.2 µg/100 ml) (60-170 (4.7-13.2 µg/100 ml)), and prolactin 367 mU/l (<220). Dynamic tests of

pituitary function were not performed. Surgical excision of a chromophobe adenoma and external pituitary irradiation led to remission of the hallucinations.

Case 2—In 1968 a 54 year old woman, well since the incomplete removal of a chromophobe adenoma 12 years previously, presented with personality change and violent behaviour. Whenever she closed her eyes she saw hundreds of toothless human faces. Her memory was normal, but she was disinhibited and disorientated in time and place, with dyscalculia and constructional apraxia. Visual acuity was J16 (right), J20 (left) and there was a right temporal hemianopia. Air encephalography showed a large intrasellar mass with right parasellar extension to the frontal lobe but she refused reoperation. Treatment with cortisone and thyroxine was started, but despite a normal protein bound iodine concentration (197 nmol/l (5 µg/100 ml), normal 137-292 nmol/l (3.5-7.5 µg/100 ml)) the hallucinations continued. In 1976 she was reinvestigated. Her hallucinations had now disappeared and computed tomography showed a large empty sella and dilated lateral ventricles. We assumed that her tumour had undergone spontaneous infarction.

Case 3—A 71 year old woman presented in 1981 with five months' visual hallucinations of doctors and famous personalities, sometimes accompanied by unpleasant smells. These hallucinations had not occurred after cataract removals one and four years previously. She showed bilateral aphakia, bitemporal hemianopia, and optic atrophy. Visual acuity was 6/12 (right) and 3/60 (left). Endocrine assessment showed plasma cortisol 196 nmol/l (7.1 µg/100 ml) at 9 am (170-720 nmol/l (6.2-26.1 µg/100 ml)) with corticotrophin of 76 ng/l (15-80), and thyroxine 54 nmol/l (4.2 µg/100 ml (50-150 nmol/l (3.9-11.7 µg/100 ml)) with thyroid stimulating hormone 3 IU/l (<6 IU).

The prolactin concentration was raised at 1253 mU/l (<350) while follicle stimulating hormone and luteinising hormone concentrations were low at 5 and 7 U/l (>10 and >15 postmenopause). Insulin tolerance testing was contraindicated because of her age. Computed tomography showed a pituitary tumour with a large suprasellar extension. A chromophobe adenoma was removed, with no immediate benefit. After external irradiation and treatment with chlorpromazine the hallucinations have improved but not disappeared.

Comment

Visual hallucinations occur in medical and psychiatric disorders, but are commoner in physical illness.⁴ Our patients had no evidence of psychiatric disorder and computed tomography excluded coincidental intracranial tumours and vascular accidents. A metabolic cause of the hallucinations seems unlikely: the borderline low cortisol concentrations in cases 1 and 3 were associated with no other features of hypoadrenalism, and although the second patient was treated with thyroxine there was no evidence of hypothyroidism at the time of hallucinations. Suprasellar extension occurred in all patients, with features of frontoparietal and temporal lobe dysfunction in cases 2 and 3. Since reduction in tumour size by surgery, irradiation, or spontaneous infarction was accompanied by complete or partial resolution of the hallucinations, a pressure effect of the tumour seems the likely mechanism for their occurrence. Formed visual hallucinations usually arise from the temporal or interpeduncular regions² but may be false localising symptoms of frontal or infratentorial lesions,⁵ and this may account for our cases with no extension to the temporal lobes.

These cases strengthen the earlier report associating pituitary adenomas with visual hallucinations.¹ All described cases have shown suprasellar extension threatening vision, and, since treatment with major tranquillisers may suppress symptoms, early recognition of the pituitary lesion is vital. A pituitary adenoma should be considered in any patient presenting with formed visual hallucinations.

Dr P K Robinson, formerly of the Wessex Neurological Centre, kindly granted permission to publish details of case 1.

1 Weinberger LM, Grant FC. Visual hallucinations and their neuro-optical correlates. *Arch Ophthalmol* 1940;23:166-99.

2 Walsh FB, Hoyt F. *Clinical neuro-ophthalmology*. Vol 1. 3rd ed. Baltimore: Williams and Wilkins, 1969:117.

3 Elkington SG. Pituitary adenoma. Pre-operative symptomatology in a series of 260 patients. *Br J Ophthalmol* 1968;52:322-8.

4 Hall RCW, Popkin MT, Devaul RA, Faillace LA, Stickney SK. Physical illness presenting as psychiatric disease. *Arch Gen Psychiatry* 1978;35:1315-20.

5 Anonymous. Localisation of visual hallucinations. *Br Med J* 1977;ii:147-8.

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