Traditionally, these contain silver or gold, or both, but, as the table shows, substitution of base metals—including lead—may not be uncommon. Reputed aphrodisiacs are widely advertised in the Urdu language newspapers in Britain. The compounds taken by our patient were purchased in Bangladesh, but lead poisoning from aphrodisiacs may be an unrecognised health hazard in some immigrants in Britain.

We thank the Laboratories of the Health and Safety Executive for lead and coproporphyrin levels, the Laboratory of the Government Chemist for analysis of the powders, Dr D Barltrop for erythrocyte protoporphyrin levels, and Professor P Lawther for his guidance.

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Comparison of transcendental meditation and progressive relaxation in reducing anxiety

Although diverse claims have been made for the effectiveness of transcendental meditation[1] (TM), there are deficiencies in the reports. Firstly, many rely on solicited testimonials without the use of controls. Secondly, those studies that have incorporated non-meditators as a control do not ensure that the two groups are comparable in their desire to change. By their decision to learn meditation meditators not only indicate a desire for self-improvement not shown by non-meditators but also they may be ripe for growth and may improve regardless of what they choose to do. Thirdly, there may be a placebo effect from, for example, the very act of going to a class or paying for instruction which may serve to make the case for TM more attractive. Fourthly, studies that attribute to meditators better psychological health as a result of practising TM tend to rely on a retrospective index of ill-health. Unless the problem of initial group differences is overcome extrapolations from experimental data of the specific efficacy of TM are invalid. We report a study in which we compared the efficacy of TM with that of progressive relaxation[2] (PR) in reducing anxiety.

Subjects, methods, and results

The subjects were people about to learn TM or PR whose anxiety levels were considered, from their check list responses, to be sufficiently high. The two groups were very similar in age, sex, occupation, and initial anxiety levels. Anxiety was measured by means of (1) the Middlesex Hospital Questionnaire,[3] a 48-question inventory designed to measure free-floating anxiety and obsessions, phobias, somatic anxiety, depression, and hysteria, and (2) the Spielburger State-Trait Anxiety Inventory.[4] Only form X2, which measures trait anxiety, was used. It takes the form of a series of statements (for example, "I am content") to which subjects indicate their assent or disagreement by marking the choices "almost always," "sometimes," "often," or "almost never."

The mean anxiety scores measured by the two methods before and after TM and PR are shown in the table. As measured by the Middlesex Hospital Questionnaire both TM and PR significantly reduced levels of anxiety (Wilcoxon tests: P = 0·01 (PR) and 0·05 (TM). Neither the initial nor the final levels of anxiety differed between the groups (P = 0·002 initial comparison; 0·002 final comparison). Thus the pattern for both groups was almost identical. The Spielberger Inventory also showed that both TM and PR significantly reduced levels of anxiety. Again there were no differences in initial or final anxiety levels between the groups, so that both groups, in effect, changed to the same extent (Mann-Whitney U: P = 0.002 initial comparison; 0·002 final comparison).

Mean anxiety scores before and after TM and PR

Method of measurement	TM		PR	
	Before	After	Before	After
Middlesex Questionnaire	39·2	33·8	39·8	34·8
Spielburger Inventory	49·4	44·0	47·2	43·8

Comment

On paper and pencil tests as used in this study TM and PR are equally effective in reducing anxiety. We think that the only way to evaluate claims made by TM practitioners is to subject them piecemeal to controlled studies of the kind described here. The alleged reduction in smoking, for example, could be investigated by comparing TM with hypnosis or, as in our study, PR. We believe that a control group of subjects is essential but in itself insufficient. An alternative "treatment" or coping mechanism must also be compared and the measurement criteria strictly defined.

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Silver poisoning associated with an antismoking lozenge

Argyria, permanent discoloration of the skin caused by excessive absorption of silver, has been associated throughout the centuries with therapeutic use of silver compounds. We report a case associated with Respaton, an antismoking lozenge containing silver acetate and ammonium chloride, said to act by precipitation of insoluble silver chloride on the buccal mucosa producing an objectionable taste with tobacco smoke.

Case report

A previously healthy 47-year-old nurse presented with a two-year history of blue-grey discoloration limited to her face and neck. Hair, nails, buccal mucosa, and conjunctivae were unaffected. She described mild fatigue and poor concentration but was otherwise well. Physical findings were unremarkable except for the discoloration. Arterial oxygen tension was normal. No methaemoglobinaemia, sulphaemoglobinaemia, or proteinuria were detected. She had used Respaton for six months before noticing the pigmentation, taking one lozenge before each cigarette while smoking up to 40 cigarettes daily. Light microscopy of a skin biopsy sample showed a slight increase in melanin deposition. Dark field examination illuminated multiple particles throughout the dermis, consistent with argyria. Electron microscopy of the dermis showed irregular, electron-dense intracellular and extracellular deposits in which silver was demonstrated by electron microprobe *x*-ray analysis. No such deposits were convincingly demonstrated in the epidermis. Neutron activation analysis of a skin sample showed a silver concentration of 72 μg/g wet weight, far exceeding the normal 0·009 μg/g due to natural accumulation. Total body content of silver was estimated at 6·4$\pm$2 g by in-vivo neutron activation analysis.[1] With her informed consent the patient was given by mouth a dose of silver acetate labelled with the radioactive silver tracer ^{110m}Ag and ammonium chloride in the same proportions as the Respaton formulation. Retention of silver, measured by whole body counting, was 21 %, 20 %, 19 %, and 18·7 % of the given dose after 1, 2, 8, and 30 weeks respectively.

Comment

Since argyria was reviewed by Hill and Pilsbury in 1939[2] it has become rare with the diminished use of silver compounds. A recent case was ascribed to silver iodide nose drops.[3] In argyria silver, probably bound to proteins, is deposited widely in the body tissues. Pigmentation results partly from stimulation of melanin deposition but mainly from photoactivated reduction to metallic silver in the dermis—hence the distribution over areas exposed to light. It may be mistaken for cyanosis. No non-cutaneous systemic effects have been described.

Deposition of insoluble silver salts in the mouth is the therapeutic basis of several preparations used to discourage smoking, but argyria resulting from this has not been described. It has been suggested that no silver will be absorbed from Respaton,[4] but our retention figures suggest that this is unlikely. The dosage was high in our case, our measurements indicating about 32 lozenges daily for six months. Nevertheless, argyria has been described after lower doses of silver. Respaton has been available from retail chemists since 1974. Inquiries in the Glasgow area suggest that it is not widely used, but it may be important to establish whether argyria has been associated with silver-containing anti-smoking preparations (Respaton, Tabmint) in other patients. No specific treatment has been attempted. The patient, unfortunately, will remain discoloured for life. She now smokes two or three cigarettes daily.

We thank Dr R Fife for permission to study his patient, and Dr A Lyell for advice.

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Facial naevus and unsuspected visual loss from glaucoma

The association of facial naevus and buphthalmos—congenital glaucoma with enlargement of the eye—has been well documented since the description of the first case in 1860.[1] Occasional cases of facial naevi have been described, however, in which there are no obvious ocular signs at birth and in which glaucoma develops in later life.[2] Such patients are accepted as not having any ocular complications and they are no longer followed up, only to present in later life with severe glaucomatous defects. We have seen three such cases recently and we describe them here to alert practitioners to this possibility.

Case 1

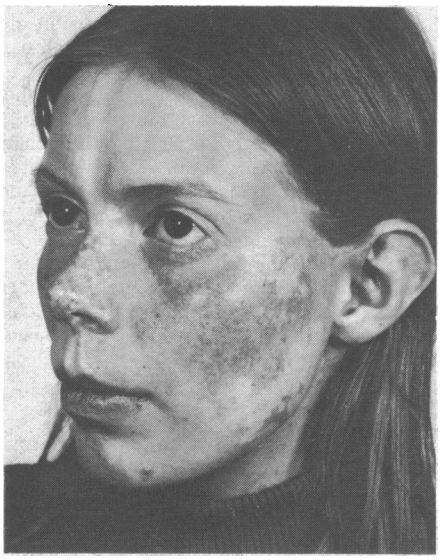
Born with extensive haemangioma over left side of face and scalp, this boy first attended an ophthalmic department at the age of 15 years complaining of pain over the left eye. Examination of the ocular fundi showed mild cupping of the left optic disc, and the visual field of this eye showed the beginning of an inferior arcuate defect. Intraocular pressures were 16 mm Hg in the right eye and 34 mm Hg in the left eye; the upper limit of normal is about 21 mm Hg. Contact-lens examination of angles of the anterior chambers (gonioscopy) showed abnormal mesodermal changes in the left eye such as are seen when there is any failure in the embryonic cleavage of the cornea from the iris tissue. Treatment with pilocarpine and acetazolamide was given and he remained under observation for about 18 months. He then defaulted and was without any treatment for about four and a half years. When the patient was next seen, at the age of 21 years, the pressure in the left eye was 40 mm Hg. There was pronounced cupping of the left optic disc, and the field deterioration had extended to the point where there were upper and lower arcuate defects. A drainage operation was eventually required to control the pressure.

Case 2

Born with a naevus on the left side of the face that extended from lower eyelid to upper lip, this woman was first seen at the age of 63 years, when she gave a history of having suddenly lost the vision in the left eye 36 hours earlier. Both optic discs were cupped and atrophic. Visual field examination showed the presence of arcuate scotomas in both fields. The intraocular pressure was 33 mm Hg in the right eye and 32 mm Hg in the left. The left optic disc showed two small haemorrhages on its surface and pronounced engorgement of the veins. The picture was that of incipient obstruction to retinal outflow. Gonioscopy showed persistent mesodermal tissue in the angles of both anterior chambers, although the naevus was unilateral. Admission to hospital and treatment of the intraocular pressures with pilocarpine (4%) drops four times a day, adrenaline (1%) drops twice a day, and acetazolamide tablets 125 mg three times a day caused a satisfactory reduction in pressure to normal values. The patient recovered the vision in the left eye and this progress has been maintained on medical treatment.

Case 3

Born with an extensive naevus over both sides of the face (see figure), this woman first attended an ophthalmic department at the age of 25 years, giving a six-month history of redness of both eyes. The intraocular pressures were 28 mm Hg in the right eye and 50 mm Hg in the left. Both optic discs showed glaucomatous cupping and atrophy, the left being more advanced than the right. There was extensive visual field loss in the left eye, where only a small central island of vision remained. The right visual field was normal. Gonioscopy showed mesodermal tissue in the angles of both anterior chambers. Surgery was eventually required to control the pressure in this patient's left eye, and a close watch is being kept on the right, which continues to be treated medically.



Case 3. Extensive naevus over both sides of face.

Comment

The earliest descriptions of the Sturge-Weber syndrome were made by Sturge[3] in 1879 and Horrocks[4] in 1883. They suggested that the naevus flammeus and buphthalmos were associated with a meningeal angioma on the same side. This was later shown radiologically by Weber.[5] Patients usually present with incomplete forms of this classical triad, and the occurrence of a facial naevus with either ocular or meningeal changes is usually referred to as the Sturge-Weber syndrome. In some cases a mild abnormality of the drainage angle does not lead to a large enough rise in intraocular pressure to cause a secondary enlargement of the globe. Such patients may present in later years with a form of chronic glaucoma. In our patients the risk of late development of glaucoma had not been realised, and they had all