of other definite clinical, radiological, and bacteriological evidence, as an early sign of a non-excavated inflammatory lesion of the lung. Its connexion with haemoptysis is, I think, accounted for by the fact that the latter is a common sign of inflammatory changes in the lungs. The blood vessels of the lung have a rich nerve supply, whereas the parenchyma, as far as investigations have shown up to the present time, has few sensory nerves or nerve endings apart from the bronchial plexuses. Further, the situation of the hyperalgesia usually indicates the site of the lesion and whether the bleeding comes from the upper or lower portions of the lung. Upper lobe lesions are connected with the third and fourth dorsal segments, and lower lobe lesions with the fifth, sixth, and seventh. The hyperalgesic areas are invariably situated, both anteriorly and posteriorly, close to the mid-line of the body, but those due to basal lesions are placed about two inches more laterally than the apical areas.

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ACNE VULGARIS, A SYMPTOM, NOT A DISEASE*

BY

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The following remarks are occasioned by the preliminary findings in a number of cases of acne occurring in the young adult female of the working classes. The investigation is being made with a view to approaching the problem of aetiology as being a question of physical and racial type, and as being determined by the influence of urban life on these types. A number of very different aetiological factors for the disease are cited in the literature, and authors lay emphasis on each of them with varying stress. The commoner causes would appear to be certain changes of puberty—particularly menstrual disorders—seborrhoea, constipation, incorrect diet, unhygienic physical life, and lack of local cleanliness. In the present series of cases attention was paid to these factors and to many other possibly associated physical characteristics and social habits.

It would appear that acne is a symptom of various abnormalities, physical and chemical, elsewhere in the body. In the same way that the physician regards palpitation not as a disease but rather as a manifestation of cardiac, gastric, renal, pulmonary, or endocrine dysfunction, so should the dermatologist regard acne as evidence of irregularity in mode of life or dietary, or of physical ill-health in some distant organ or organs. That different cases have a different aetiology may be exemplified by the three following cases.

1. Miss S., an apparently healthy individual, aged 24, has on three occasions in two years developed an acute pustular acne of the face persisting for three weeks. Each outbreak was preceded by a definite period of malaise of about the same period.
2. Miss N., aged 25, suffers from a pustular acne which is only severe during menstruation.
3. Miss K., aged 24, had a pustular acne which came on suddenly at the age of 22, when circumstances compelled her to undertake a sedentary occupation.

Further, it is accepted that chemicals of the halogen group are capable of producing acneiform lesions. Kenneth Wills has recently reported cases in which the ingestion of pig fat appears to be the chief precipitating

factor, while all of us in industrial areas have seen cases of "oil grub" due to persistent exposure of the skin to dirt and lubricating materials. Of recent years suggestions have been put forward which appear to provide a common aetiology for the above different types. Barber has taken the attitude that metabolic changes consequent upon an altered mode of life may produce an environment which enables harmless saprophytes to become harmful parasites. Sequeira has mentioned the conception of "biotropism"—a faculty possessed by ingested substances of encouraging the vitality of superficial parasites. It would appear possible to combine the above two lines of thought and say that in acne, provided we have suitable terrain, a number of widely different intercurrent causes may produce identical clinical symptoms. To go even further than this, it may be suggested that inherent physical characteristics of the host will modify to a marked degree the clinical type, comedones only appearing in one individual and an acne nodularis in another.

With a view to investigating the accompanying manifestations of acne in other areas of the skin and in other systems the following form was filled in for every case.

Serial Number.....	Name.....	Age.....	Sex.....
O.P. Number.....	Marital State.....	Children.....	
Build and Physique.....	Occupation.....		
Type of Acne, Severity and Distribution.....	Colour.....		
General Health of Skin and Description of Type of Skin.....			
General Health of Scalp.....	General Moisture.....		
Presence of Ichthyosis.....	General Grease Secretion.....		
Peripheral Temperature.....	Local Grease Secretion.....		
Peripheral Colour.....			
Peripheral Moisture.....	Condition of Teeth.....		
Pigmentation.....	Hypertrichosis.....		
Constipation.....	Pulse Rate.....		
Thyroid.....	Onset of Puberty.....		
Amount of Exercise.....	Menstrual History.....		
Amount of Clothing.....	Onset of Acne.....		
Diet.....			
Remarks.....			

It is hardly within the scope of the present communication to mention in detail the reasons for the inclusion of the various points, but I think that it will be agreed by all that the majority are of value in determining physical type, general health, mode of life, and skin normality.

SUMMARY OF FINDINGS

Some of the findings in the first 100 cases appear of interest:

Fifty-five per cent. of the patients examined showed a general increase of sebaceous activity on face, chest, back, and scalp apart from any true comedones or pustules. The greater number of these scalps were stated to become "greasy" within five days of washing.

Constipation of a degree sufficient to demand the regular taking of aperients was complained of in 60 per cent.

Follicular pernirosis, as shown by a pin-point hyperkeratosis with minute areas of capillary stagnation, was found on the pulvinar areas and posterior upper arms.

Peripheral cyanosis of greater or less degree was found in 28 per cent. of the cases, although the patients had been seated in a warm room for at least one hour prior to examination.

A marked "clamminess" of the hands was found in about one-third of the cases; this clamminess has been shown by the writer elsewhere² to be a rather misleading phenomenon. A palpable moisture on the hands does not necessarily imply any increased secretion of moisture. In the greater number of patients whose peripheral sweat loss was estimated exactly the secretion was actually below average, and appeared to be merely the result of a lowered peripheral temperature and consequent lessened evaporation.

Peripheral temperature, as estimated by the personal criterion, was raised very rarely indeed—a hand as warm

* Read in the Section of Dermatology at the Centenary Meeting of the British Medical Association, London, 1932.

or warmer than the writer's was present in only 5 per cent. This fact appears to be of definite significance when compared with the results of inquiring as to the amount of clothing the patient was in the habit of wearing in order to keep comfortably warm. In 40 per cent. of the cases the amount of clothing appeared excessive, and many patients stated that they had always had a poor circulation.

I have been unable to find statistics as to the loss of teeth from dental caries in the young adult, and cannot say definitely whether the figure of 52 per cent. with the decay of more than six teeth is high for the average age of 21. It would certainly seem common to find complete upper dentures among those complaining of acne.

Menstrual irregularity—that is, variations of five days or more—was complained of as occurring, or as having occurred, at the onset of acne in 40 per cent. of the cases. This variation was more commonly found in brunettes than in blondes, and it would be of interest to know whether irregularity of this degree is more common in the healthy females of the former type.

Acne appeared to have a later onset in brunettes, at 17, than in blondes, at 15½. This, however, may be due to the fact that comedones and excessive grease formation are less noticeable and less likely to be regarded as pathological in those of dark complexion. It certainly cannot be correlated with any difference in date of onset of menstruation, since the average age of 14 for this was common to both groups.

It is too early, and the cases dealt with are too few in number, for any attempt at explanations of the above findings. It does, however, already seem clear that in acne we are dealing with a condition which cannot be regarded as a local disease of the skin with a single aetiological factor. It is an expression in the skin of malfunction elsewhere manifested by certain groups of susceptible individuals.

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¹ *Brit. Journ. Derm. and Syph.*, November, 1931.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

PARADOXICAL EMBOLISM OF THE RIGHT MIDDLE CEREBRAL ARTERY

In discussing the condition of paradoxical (or crossed) embolism, Thompson and Evans (*Quart. Journ. Med.*, 1929-30, xxiii, 135) remark upon its infrequent occurrence, considering the frequent association of venous thrombosis with a patent foramen ovale. The following case is of interest not only on account of the comparative rarity of the condition, but also because of the difficulty experienced in arriving at an accurate clinical diagnosis.

CASE RECORD

History.—A right-handed man, aged 51, was admitted to the Hospital for Epilepsy and Paralysis, Maida Vale, on May 27th, 1932. Five weeks previously the patient was found in bed with a left hemiparesis, which in two days progressed to a hemiplegia. Apparently there had been no loss of consciousness and no disturbance of speech. There was a vague history of headache and pain down the back at the onset of the illness. During the five weeks preceding admission he had suffered from severe occipital headache (worse at night), impairment of memory, and incontinence of urine and occasionally of faeces. There had been no vomiting.

Past History.—Heavy drinker for many years. No venereal disease. During the war he had suffered from pneumonia, sunstroke, dysentery, and typhoid fever.

Examination and Progress.—There was a complete left hemiplegia. Retinoscopy showed normal fundi and very

little atheroma of the retinal vessels. The visual fields showed a left upper homonymous quadrantic hemianopia to a 1 mm. object at 2,000 mm. To a 4 mm. object at the same distance the visual fields were full. The left pupil was slightly larger than the right, and reacted sluggishly to light, with a brisker consensual reaction. The right one reacted briskly to light, and both reacted well on convergence. There was impairment of voluntary conjugate movement of the eyes to the left, but on rotating the head to the right full conjugate movement to the left was possible. All forms of sensibility were impaired over the left half of the body. The muscles of the left forearm and hand were moderately wasted. The left upper and lower limbs were spastic, with an increase in the deep reflexes on that side and an extensor plantar response. The heart was not enlarged, and the sounds were normal. Blood pressure 120/80. The radial and brachial arteries were unusually soft for a man of this age. No abnormality was detected in the lungs. There was no subcutaneous oedema. Blood Wassermann reaction was negative. Examination of the cerebro-spinal fluid showed: Wassermann reaction negative, total protein 0.02 per cent., cells 1 per c.mm. Lange's curve 00000000000. The fluid was not under increased pressure. X-ray examination of the skull showed nothing abnormal.

Soon after admission his condition became worse, and he complained of severe headache. He was drowsy, and his speech was incoherent. Catheterization became necessary. The spasticity of the limbs disappeared, and flaccid paralysis ensued. Fourteen days after admission he became very drowsy, and 6 oz. of 50 per cent. magnesium sulphate solution were given by rectum on three occasions, but with no improvement. On the same day there was found at the left base a small patch of dullness, with diminished movement and faint tubular breath sounds. No rub was heard. He did not complain of pain in his chest, nor was there any cough or sputum. He died seventeen days after admission.

Post-mortem Examination.—A moderately developed, muscular man. Infarction of brain, organizing thrombus in right middle cerebral artery, thrombosis of left iliac vein, patent foramen ovale. Massive softening of right cerebral hemisphere, involving white matter of frontal lobe in front of, and to lateral side of, anterior horn of right lateral ventricle, right caudate and lenticular nuclei, with adjacent internal capsule, external capsule, and island of Reil. Similar softening of contiguous upper third of temporal lobe and white matter of parietal lobe. Complete occlusion (by organizing thrombus) of lumen of right middle cerebral artery at origin of first large branch, 2.5 cm. from termination of internal carotid artery. Rusty, reddish-brown, externally laminated thrombus filling left common iliac vein a few centimetres below junction with inferior vena cava and extending down external iliac and femoral vein to lower end of Hunter's canal. Vein not explored below this level. Haemorrhagic infarct (3 cm. diameter) in outer border of lower lobe of left lung. Delicate fibrous adhesions uniting visceral and parietal pleurae over infarct. Foramen ovale patent to pencil and protected by valve-like fold. No thrombus or other abnormality in heart. Slight general atheroma. Engorgement and slight acid digestion of lungs. Back-pressure congestion of spleen and of kidneys. Parenchymatous degeneration of liver. Middle ears clean. No oedema of legs. Healed superficial abrasion in skin over left internal malleolus.

DISCUSSION

The clinical diagnosis in this case was difficult. Thrombosis of the middle cerebral artery was considered improbable in the absence of any other indications of cardiovascular degeneration. Rupture of a congenital aneurysm was thought possible on account of the headache and pain down the back, but this diagnosis, as well as that of syphilitic endarteritis obliterans, was not supported by the examination of the cerebro-spinal fluid. The presence of a tumour could not be excluded with certainty, the abrupt onset of symptoms in such circumstances being suggestive of local oedema or of haemorrhage into the tumour. The absence, however, of premonitory symptoms, of signs of increased intracranial pressure, and of radiographic abnormalities in the skull was evidence against a tumour. A diagnosis of paradoxical embolism was never considered. Thrombosis of the femoral vein was not specifically looked for, but there was never any clinical indication of its presence. This is surprising in view of the extensive thrombosis found at necropsy. The pulmonary infarct was small, and gave no symptoms. The signs found in the chest shortly