place. In addition she had bilateral wasting of the deltoid muscles and winged scapulae, attributed to acquired muscular dystrophy. She also suffered from severe kyphoscoliosis, the cause of which is uncertain: there was no evidence of osteoporosis or definite history of poliomyelitis.

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TEMPORAL ARTERITIS IN GENERAL PRACTICE

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Since Horton, Magath, and Brown's (1932) description of temporal arteritis it has been regarded as a rarity and most of the standard textbooks of general medicine give it scant regard.

Cooke, Cloake, Govan, and Colbeck (1946) seem in retrospect as voices crying in the wilderness when they said: "There exists in elderly people a widespread arterial disease, not uncommon, but rarely recognized, in which characteristic arterial and striking local signs occur, and in which inflammatory and degenerative changes in the walls of the affected arteries produce a characteristic histologic picture."

Harrison (1948) reviewed the 75 cases which were all that had been reported in the world literature at that time. Robertson (1952) reported a personal series of 28 cases in the preceding seven years and again suggested that the condition was probably much commoner than had hitherto been suggested. This

contention was supported by the painstaking monograph of Roux (1954), who systematically combed the medical journals and reported 248 published cases.

My present purpose is to report nine cases of this condition occurring in a medium-sized provincial general practice during the period March, 1953, to March, 1959, and thus to bear out the contention that this is probably a much commoner condition than is generally acknowledged.

Nomenclature

Hutchison (1890) first described the condition but did not name it. Horton *et al.* (1934) called the disease "temporal arteritis," but it has since been described as "Horton's arteritis," "giant-cell arteritis," and "cranial arteritis." Martin, Lynn, Dible, and Aird (1956) are in favour of the term "non-specific granulomatous arteritis" with an appropriate prefix, such as "generalized" or "temporal."

Temporal arteritis is a generalized arterial disease almost exclusively affecting elderly people; the average age is about 68 years, and males and females are affected in almost equal proportions (Roux, 1954). From the pathological point of view, temporal arteritis is generally regarded as a collagen disease and, in that cryptogenetic family, a first-cousin to polyarteritis nodosa. The distinction between the two is the basis of the general pattern of the disease rather than on any hard-and-fast dividing line. Broadly speaking, temporal arteritis is a disease of the elderly, is usually relatively benign, and selects the larger arteries. Polyarteritis frequently attacks younger people, tends to run a more acute and malignant course, and selects the medium-sized and smaller arteries of muscles and viscera.

There are other inflammatory vascular conditions related to these two. Zeek (1952) groups these conditions together under the heading "necrotizing angiitis," in all of which there is fibrinoid necrosis and inflammatory reaction involving all three coats of the vascular wall; in her classification five types of necrotizing angiitis could be differentiated (hypersensitivity angiitis, allergic granulomatous angiitis, rheumatic arteritis, periarteritis nodosa, and temporal arteritis).

McCombs, Patterson, and MacMahon (1956) report 30 cases of "allergic" vasculitis, a condition, they maintain, in which vascular changes result from an allergic reaction within the vessel walls, but quite distinct from periarteritis nodosa.

Case 1

A spinster, aged 86, of gentle upbringing was first seen on March 28, 1953. She complained of sudden blindness in the left eye, having suffered for some weeks from increasing headache, nausea, and sporadic vomiting. She was very weak, and for some weeks had had an unexplained low-grade pyrexia.

On examination the left eye had no perception of light, and the fundus appearances were those of occlusion of the central retinal artery. Headache was very severe and the scalp tender to touch, especially in the left temporal area. Both superficial temporal arteries were thickened, tortuous, and tender. The left showed no pulsation. In addition, both occipital arteries were palpable and tender, and both facial arteries could be felt as thickened cords at the point at which they crossed the mandible.

Sight did not return in the left eye, and the patient declined slowly over several months until she died on January 21, 1954.

Case 2

An unmarried retired seamstress aged 71 had a variety of complaints over many weeks, including pain in back and left shoulder, headache, anorexia, heartburn, flatulent dyspepsia, and night sweats. Latterly headache had become the dominant symptom and there had been transient visual disturbances ("like fireworks"). The evening temperature was found to be elevated, the E.S.R. 90 mm./hour (Westergren).

On examination on January 12, 1954, there was marked tenderness of the scalp, and both superficial temporal arteries were thickened and tender. Both were pulsatile, the overlying skin was bluish in colour. Facial and occipital arteries were also involved. Ophthalmoscopy revealed engorgement of the left central retinal vein. Both fields of vision were full.

On January 13 she was admitted to hospital under the care of an ophthalmic surgeon; she was given a course of corticotrophin with immediate relief of symptoms. The nocturnal pyrexia, which had been in the region of 100–101° F. (37.8–38.3° C.) immediately subsided. On cessation of the corticotrophin evening pyrexia reappeared, but headache was much less severe. The left fundus had returned to normal.

She returned home and continued to have a low-grade pyrexia for some weeks, but symptoms gradually cleared-up during the next nine months, and she remains well at the time of writing. Apart from a consistently raised E.S.R. (up to 105 mm./hour) extensive haematological and biochemical investigations revealed a hypochromic anaemia (Hb 71%) as the only other abnormal feature.

Past history.—Several episodes of constitutional eczema; hypersensitivity to iodides and bromides.

Case 3

A retired cobbler aged 64 was first seen in February, 1955. He complained of "something the matter with his eye," and had had right fronto-temporal headache for some weeks previously, but this had now improved. Lately he had had shivering turns. When he was seen the eye symptoms had already been present for two weeks.

On examination he had a complete palsy of the right third nerve (Fig. 1). The right superficial temporal artery was thickened, tortuous, and tender, but was pulsating. The patient was of poor mentality, but his general physical condition was satisfactory. There was temporal pallor of both disks, and it was not possible to obtain vision beyond

FIG. 1.—Case 3. Dilated and tortuous temporal vessels in association with third-nerve palsy.

6/18 in the right eye and 6/12 in the left with correction. The retinal vessels were sclerotic.

He was admitted for observation, under an ophthalmic surgeon, but no pyrexia was recorded and the E.S.R. was not accelerated. Blood-pressure was 190/110; Kahn negative. X-ray examination of the skull showed no abnormality. Ten months later he developed a fulminating pneumonia and died on November 22, 1955. There had been only very slight recovery in the third-nerve palsy.

Past History.—Transient left hemiplegia in 1951.

Case 4

A widow, aged 72, of gentle upbringing complained on June 17, 1955, of abdominal pain and diarrhoea, treated with sulphaguanidine. Abdominal pains gradually abated, but on July 26 she complained of severe headache and pain in the jaws and neck. Four days later she was no better, and was markedly tender over superficial temporal, facial, and occipital arteries. Pulsation was present. Headache had become much worse; tongue furred. Movement of jaw was painful. On August 1 she was worse, temperature 100° F (37.8° C.); tenderness exquisite; speech slurred; mental condition stuporous; E.S.R. 104 mm./hour; no ocular symptoms. Ophthalmoscopy showed normal fundi.

Corticotrophin therapy produced a remarkable response. Pain diminished and there was general mental and physical recovery. E.S.R. on August 3 was 75 mm./hour; leucocytes 10,400/c.mm. (neutrophils 60%, lymphocytes 30%, monocytes 6%, eosinophils 4%). Urine contained albumin, ketones, a few red cells, and cellular casts.

Later there was some return of headache, and there was still localized tenderness over several branches of the external carotid arteries on each side. Tenderness was also noted along both brachial, both femoral, and the left anterior tibial arteries. Urine still contained albumin, red cells, pus cells, and granular and cellular casts. Cultures remained sterile.

On August 12 she was admitted to St. Bartholomew's Hospital, where she was kept under observation for 12 days. On August 14 the white cells numbered 13,000/c.mm. Search was made for L.E. cells but none were found. B.P. 138/78; Hb 80%. A large number of investigations were carried out, including chest x-ray examination, E.C.G., and a variety of biochemical tests, none of which indicated any abnormality. In view of the renal changes and the eosinophilia, a provisional diagnosis of polyarteritis nodosa was made.

The patient improved during the next six weeks, but in November and again in December there were further episodes of acute abdominal pain, diarrhoea, prostration, and fever. E.S.R. was 37 mm./hour on December 21.

In January cortisone therapy was instituted with immediate benefit. Early in May she was having 25 mg. of cortisone daily, when a further episode occurred. Severe abdominal pain followed, with intense pain in the lower back and in both legs. Marked aortic pulsation was noticed in the epigastrium, the aorta was tender, and a loud bruit was audible with the stethoscope. There were rapid collapse, shock, and stupor. Again recovery occurred.

On June 26, 1956, I performed a muscle biopsy on the right calf, but there was no histological sign of polyarteritis in the small vessels seen. She has since made a slow recovery. She is able to do light housework and gardening, but has widespread intermittent pains, mostly in the lower back and legs. Certain areas are sometimes tender to touch. There is no fever, and E.S.R. has been normal since September, 1956. Joints all move freely and there is no peripheral neuritis. She has had an occasional oedema of the ankles lasting a few days, and an occasional slight localized purpura. B.P. on August 7, 1957, was 170/92. It has remained at about this level.

In May, 1957, a biopsy of the left superficial temporal artery was carried out in an attempt finally to establish

the true nature of her condition. Histologically the segment of the artery showed changes in keeping with past non-specific arteritis of moderate degree. No areas of recent inflammation were seen (Fig. 2).

Past History.—Severe bronchitis at age of 69, treated with penicillin. Many minor complaints, including tinnitus, weakness, and headache, preceded the onset of the present illness. She stated that she had lost 2 st. (12.7 kg.) in weight during the previous six months. She is said to have had

FIG. 2.—Case 4. Section of left superficial temporal artery showing evidence of healed non-specific arteritis.

FIG. 3.—Case 5. Section of right superficial temporal artery, showing almost complete occlusion of lumen by organizing thrombus, disappearance of elastic tissue, and presence of inflammatory and giant cells.

migraine for many years, for which she has taken ergotamine tartrate by self-injection. There had been sundry abdominal symptoms in the past few years; these had been investigated radiologically and ascribed variously to diverticulitis and subacute appendicitis.

Case 5

A widow, aged 71, of gentle upbringing was first seen on January 12, 1956, when she stated she had felt unwell for several months, with "giddy turns" and dyspepsia. Her main complaint was of severe neuralgic pain down the left side of the face and temporal region of two weeks' duration, during which period she had had a persistent low-grade pyrexia.

On examination there was tenderness over the left carotid trunk, both superficial temporal arteries (especially the left), and both facial and both occipital arteries. There was some pain on moving the jaw.

Temperature was 100.2° F. (37.9° C.); B.P. 180/90; E.S.R. 115 mm./hour; Hb 81%; leucocytes 4,500/c.mm. (neutrophils 56%, lymphocytes 36%, monocytes 8%).

On January 17 she was admitted to hospital, under the care of a consultant physician, still with severe headache and rather drowsy. Cortisone was started, and there was an initial improvement in symptoms, with reduction in the pyrexia. Subsequently there was some return of headache, though more now in the right temporal area. No pulsation could be detected in either temporal vessels. On February 6 corrected vision in each eye was 6/6; there was, however, a small crescent-shaped scotoma below the right fixation point. The fundi showed retinal arteriosclerosis, and there was a patch of choroidoretinal atrophy adjacent to the upper temporal margin of the right disk. This was considered to be an old-standing lesion, and probably related to the scotoma.

On February 28 biopsy of the right superficial temporal artery was carried out. It was described at operation as "thickened, white, nodular, with no bleeding on resection." Histological examination confirmed the diagnosis of temporal arteritis (Fig. 3).

For a long period afterwards the sedimentation rate was consistently raised (58 mm./hour on May 20, 1957). For many months she continued to feel unwell, and complained of intermittent headache and giddiness. She had also had occasional transient visual disturbances ("showers of sparks"). Cortisone was discontinued on May 7, 1956. Apart from occasional attacks of giddiness, she remained well at the time of writing. E.S.R. was normal.

Case 6

An unmarried woman, aged 64, of gentle upbringing was first seen on March 12, 1956, when she complained of headache, anorexia, and scalp tenderness. Two weeks later she was worse; evening temperatures had been consistently above normal, up to 100.6° F. (38.1° C.). She had developed painful nodules in her scalp, and could hardly bear to brush her hair.

On examination the superficial temporal arteries on both sides were thickened, tender, tortuous, and pulseless. Both

FIG. 4.—Case 6. Section of left superficial temporal artery, showing (a) partial destruction of elastic lamina and a localized area (b) where the inflammatory process is still active.

facial and both occipital arteries were also tender. Vision was 6/6 in both eyes with glasses. Fundi were normal. Perimetry showed both visual fields to be full. The B.P. was 178/100; E.S.R. 107 mm./hour, Hb 87%; leucocytes 6,400/c.mm. (neutrophils 76%, lymphocytes 22%, monocytes 2%).

Cortisone therapy was instituted with dramatic relief of symptoms and continual slow but steady objective improvement. There was a gradual reduction of the dosage of cortisone, which was finally discontinued on May 30, 1957. During treatment she had occasional transient visual disturbance ("showers of coloured lights, like fireworks"). E.S.R. on March 28, 1957, was still 42 mm./hour.

On April 8, 1957, a toe was amputated for orthopaedic reasons, and advantage was taken of this to secure a biopsy of the left superficial temporal artery. This confirmed the diagnosis of temporal arteritis, and, in fact, showed several foci of active arteritis still continuing (Fig. 4). The E.S.R. fell to normal and she remained well until January, 1959, when she began to develop rheumatoid arthritis.

Past History.—"Rheumatism" in hands, knees, and feet in 1948.

Case 7

A retired nurse aged 76 complained of blurred vision in the left eye when first seen on April 25, 1956. She returned from a visit to New Zealand on February 18, 1956, since when she had had intermittent "neuralgia" in the occipital region and jaws. There had been occasional aching in both temporal regions, but this was not severe. On two occasions there had been a sharp pain behind the left eye which lasted an hour or two. Two weeks previously she had been troubled for several days with audible pulsation in her right ear at night. Six days previously she had had a transient

loss of vision and a sensation of giddiness. Appetite had been normal, and there had been no malaise or feverishness.

The left fundus was normal except for some engorgement of the retinal veins. E.S.R. was 70 mm./hour. The following morning she woke at 4.30 o'clock with more acute pain in the eye, frontal headache, pain in the jaw, and a little pain in the left temporal area. Later it was found that vision in the left eye was reduced to hand movements only. Overnight the disk had swelled visibly, and there were three small haemorrhages radiating out along the superior nasal and temporal retinal vessels. Both superficial temporal arteries were tender in places, were pulsating, and were not thickened.

She was admitted to hospital under the care of an ophthalmic surgeon, and was immediately started on a course of corticotrophin, together with anticoagulants (heparin and phenindione). The following day the right fundus showed some engorgement of the lower retinal veins, with slight blurring of vision (6/18). During the next few days the neuralgic pains improved and the right eye recovered completely. There was no appreciable recovery of sight in the left eye. The E.S.R. had risen to 105 mm./hour on May 7, and remained raised for several months. B.P. 170/60; Hb 82%; leucocytes 5,300/c.mm. (neutrophils 57%, lymphocytes 36%, eosinophils 3%, monocytes 4%). Urine showed no abnormality.

The patient continued on a maintenance dose of cortisone, and remained for some months in moderate health. She had occasional frontal headache on waking, and pain above and behind the right eye. She described her vision as "smudgy" in the morning, and was occasionally troubled with visual disturbance in both eyes described as a "dull dazzle."

In January, 1957, she complained of a tender area on her left temple, noticed when brushing her hair, and during the next two months had three separate attacks of thrombophlebitis in the superficial veins of each leg. E.S.R. on January 18, 1957, was 9 mm./hour. In February a biopsy on a phlebotic superficial vein from the left calf showed only changes in keeping with a simple thrombophlebitis.

After a period of dyspepsia she was found to have a gastric ulcer in September, 1957. She recovered from this after a period of hospital treatment, and remained fairly well at the time of writing, the E.S.R. no longer being elevated.

Case 8

A retired labourer, a widower aged 84, was first seen on October 1, 1956, complaining of weakness, dizziness, nausea with occasional vomiting, and headache mainly in left frontal area. For several years he had had dysphagia and vomiting attacks. This had been investigated radiologically, and hiatus hernia with narrowing of the lower third of the oesophagus had been diagnosed.

He was a depressed, weak, and emaciated old man. The left superficial temporal artery was prominent, tortuous, and rather tender. Vision in the left eye was said to have been deteriorating for some months, accompanied by pains

("terrible at times") in the temporal and occipital regions. Vision in the right eye had apparently been negligible for about 20 years. Both facial and occipital arteries were thickened and tender. E.S.R. was 110 mm./hour; B.P. 200/100. He had chronic bronchitis and advanced peripheral arteriosclerosis. Hb 92%; leucocytes 7,200/c.mm. (neutrophils 61%, lymphocytes 31%, monocytes 8%).

A diagnosis of temporal arteritis was made, and cortisone therapy was instituted. Later he was admitted to hospital under the care of an ophthalmic surgeon. His symptoms subsided to some extent, but he remained very depressed and feeble. E.S.R. on October 18 was 82 mm./hour and on October 29 60 mm./hour. He was then discharged to a geriatric unit, where he died the following month with no further developments supervening.

Past History.—Apart from that already referred to, he had been in hospital with bronchopneumonia in 1954 and in 1955.

Case 9

A retired carpenter aged 74. When first seen on May 27, 1958, he complained of aching and tenderness in the scalp and "rheumatism" of the neck, shoulders, and legs of several weeks' duration. He felt well enough in himself, but his appetite was poor. E.S.R. was 28 mm./hour; B.P. 154/86. Both superficial temporal arteries were very prominent, tender, and tortuous, especially on the left side; neither was pulsating. No other localized tenderness along the course of other branches of the external carotid could be elicited. He was treated with aspirin compound tablets, and the symptoms subsided.

On June 23 the temporal arteries were less prominent and tender; there was no pulsation; E.S.R. 30 mm./hour; no L.E. cells were found; serum proteins were normal. On July 11 all scalp tenderness had disappeared and E.S.R. had returned to normal. On December 11 E.S.R. was 10 mm./hour, and, apart from some hyperchlorhydric dyspepsia, there had been no further symptoms.

Past History.—Transient diplopia in 1952, attributed to vascular spasm.

Discussion

The practice in which these cases occurred is a predominantly urban one containing about 3,700 National Insurance patients with a small admixture of private practice on the southern fringe of the Kentish Weald. The practice is run by another doctor and myself in partnership. There is very little local industry, and the proportion of old people is high. The figures at the last census showed that 21.16% of the local population were over 60 (General Register Office, 1954). This is double the national figure, which was 10.6% in 1955 (Central Statistical Office, 1956).

Diagnosis

The clinical features of Cases 1, 2, 5, 6, and 9 leave little doubt about the diagnosis; moreover, this was confirmed by biopsy in Cases 5 and 6.

Case No.	Age and Sex	Duration of Illness	Results	Clinical Features				Initial Blood Examination				Remarks
				Loss of Weight	Head-ache	Tinnitus	Photopsiae	E.S.R. mm./hr.	Hb	W.B.C.	Eosino- phils	
1	86 F	11 months	Dead	+++	+++	—	—		No record			No recovery of sight in left eye
2	71 F	12 „	Fully recovered	++	+++	+	++	90	71%	8,700	1%	Prompt relief with cortico-trophin
3	64 M	2-3 „	Dead	—	++	—	—		Said to be normal			Right third-nerve palsy.
4	72 F	2 „	Most symptoms in abeyance	+++	+++	++	—	104	84%	10,400 (later 13,000)	4% (later 13%)	Death due to pneumonia
5	71 F	19 „	Symptom-free	++	+++	++	+	115	81%	4,500	Nil	Biopsy of left temporal artery showed healed arteritis
6	64 F	18 „	„	++	+++	+	+++	107	87%	6,400	Nil	Positive biopsy right superficial temporal artery
7	76 F	16 „	„	—	++	+++	+++	70	82%	5,300	3%	Positive biopsy left superficial temporal artery
8	84 M	2 „	Dead	+++	++	—	—	110	92%	7,200	Nil	Blind in left eye
9	74 M	? 4-5 „	Symptom-free	—	++	—	—	28	104%	—	—	Old-standing oesophageal stenosis
												Mild case. No general systemic disturbance

In Case 3 the history of headache, third-nerve palsy, and a clinically enlarged and tender superficial temporal artery are very suggestive. The absence of fever or raised E.S.R. are contrary factors, but it is submitted that the condition was quiescent when paresis took place. Furthermore, several confirmed cases have been reported where the E.S.R. was within normal limits (Oldberg, 1942; Anderson, Nicholson and Iverson, 1948; Cohen and Harrison, 1948; Keltai and Endes-Eisner, 1949). Lack of corroboration from biopsy was unfortunate here, but where clinical recovery had occurred (except for the residual paresis), subsection of the patient to operation would be scarcely justified for purely academic ends.

In Case 7 the usual picture of acutely inflamed temporal arteries was not seen, nor was there the usual prologue of malaise, persistent headache, and scalp tenderness that so often raises the curtain on the tragedy of sudden blindness. The latter event, however, did ensue in a manner which suggested venous rather than arterial obstruction, with retinal haemorrhage and engorgement of veins. The greatly raised E.S.R., the rather bizarre cephalic pains, the onset of blindness, the response to steroid therapy, and the subsequent long-continued indisposition all combine in support of the diagnosis.

In Case 8, again, the local involvement of the temporal arteries was not striking, though there was a certain amount of tenderness and thickening. The high E.S.R. supports the diagnosis, but the whole picture was complicated by the poor general condition of the patient, evidently largely consequent on the oesophageal obstruction. It is unfortunate that a necropsy was not possible in this case.

Case 4 presents a most interesting problem because there are features of the condition which suggest both temporal arteritis and polyarteritis nodosa. The eosinophilia and the renal changes which occurred in the initial acute stages of the illness suggest the latter; while the early involvement of the cranial arteries, the relatively benign course of events, and the eventual slow journey towards recovery, together with the size of many of the arteries involved, all point towards temporal arteritis. The muscle biopsy did not show any signs of polyarteritis, and involvement of the renal arteries has occurred in temporal arteritis (A. T. K. Missen, 1956, personal communication), which might account for the renal changes. The histological findings after biopsy of the temporal artery showed a healed arteritis, but it was not possible to be specific about the precise nature of the inflammation.

It is interesting to note that four patients complained of photopsiae ("fireworks," "showers of sparks," "dull dazzle," etc.). As an indication of disturbance in the retinal circulation, this would seem to be a system to respect, but which has not obtained much prominence in hitherto published work. Five patients also complained of tinnitus.

Aetiology

It may be significant that, of these nine cases, five were in women of gentle and cultured habits and upbringing. Harrison (1948) says there is evidence that "middle-class and well-to-do patients seem to have been rather more frequently affected." Horton and others, in the early cases, seemed to find greater involvement in country dwellers than in town dwellers, but this has not proved to be the rule since. The fact that the proportion

of people over 60 in the district is double the national figure may well be important, since this is a disease of the elderly.

Each patient was closely questioned for history of allergy. Case 2 had a history of constitutional eczema and was hypersensitive to iodides and bromides. Case 7 was said to have had migraine for many years, which she treated by self-administered injections of ergotamine tartrate. Since the start of her present illness there have been very infrequent attacks of migraine, and there does not appear to be any link between these attacks or injections of ergotamine and any exacerbations of the arteritis. It is perhaps noteworthy, since sulphonamides have been blamed for polyarteritis, that the illness started with diarrhoea, for which she was treated with sulphaguanidine; this preceded the very early acute symptoms such as headache, fever, and general prostration.

Conclusion

It is said that about 50% of the victims of this condition have ocular complications (Roux, 1954). But it seems possible that many more cases do occur without ocular involvement, and for this reason may not be recognized.

In a number of cases the clinical features appear to be ill-defined. Gilmour (1941) reported the case of a woman of 64 who suffered from an ill-defined disease for 20 months and never showed any indications of temporal arteritis. She eventually died of amyloid disease of the kidneys, but at necropsy many of the major arteries showed what the author interpreted as the healing stage of temporal arteritis. Harrison (1948) in his review noted several instances in which symptoms were not very striking. Robertson (1952) said, "Cranial arteritis is probably a common disease." He exhorted all physicians, ophthalmologists, rheumatologists, and geriatricians to add it to their diagnostic vocabulary. With respect, I believe he should have included the family doctor in his list, and with humility I commend this condition to my colleagues.

Summary

Nine cases of temporal arteritis are reported in a medium-sized general practice during the period March, 1953, to August, 1957.

One case was of particular interest in that it showed features common to both temporal arteritis and polyarteritis nodosa.

Five of the cases were in women of gentle habits and upbringing. All were elderly.

The proportion of patients in the district over 60 years of age is more than double the figure for the country as a whole.

Attention is drawn to the occurrence of photopsiae in this condition as a symptom of significance.

Temporal arteritis is probably a much commoner condition than is generally recognized.

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LENGTH OF STAY IN MENTAL HOSPITALS AND SOME FACTORS INFLUENCING IT

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"If I come into hospital, how long shall I have to stay?" is a question to which many patients would like to know the answer: psychiatrists, too, would like to know—in terms more precise, if possible, than textbooks and experience afford. To assess the effectiveness of hospital case management or of some new treatment we need to know what ordinarily happens when patients are admitted. In an illness such as lobar pneumonia or measles, where the onset is acute, the course is consistent, and the end clear, the effect of a new antibiotic drug may fairly readily be told. In contrast with this, the onset of mental illness is often insidious, the causes less well defined, the course more variable, remittent, or relapsing, and the outcome less certain. In spite of this it is possible to predict fairly accurately what will happen to groups of patients in particular circumstances, although exact prediction for individuals is at present impossible.

National Expectation

In the Mental Health Supplement for 1950–51 (Registrar-General, 1955) the duration of stay in mental hospitals is given for patients admitted and discharged during one year. Patients admitted but not discharged in the same year are not included, and no information is therefore available of the expected duration of hospital stay for any particular group of admissions or of patients within a special diagnostic category. Nor does the later Mental Health Supplement (Registrar-General, 1958) help in this respect, for the duration of stay is given for patients discharged during the year, but irrespective of the year of their admission. For the purpose of recording the natural history of illness it would be better to choose a two-year period or longer, in order to follow what happens to patients admitted in one particular year: without this provision it is not

possible to study the fate during the next twelve months of those admitted in the last months of the year.

We are indebted to Dr. W. S. Maclay and to Mr. K. R. Creedy, statistician at the Board of Control, for kindly making tables available of the number of patients admitted to mental hospitals in England and Wales in 1953 and followed to the end of 1954, so that the length of their stay in hospital up to 12 months could be determined. This information is presented in Table I. The length of stay is given in months for percentage proportions of those admitted during 1953, according to their age, sex, and diagnosis. Because of the natural tendency to remember long-stay patients but to forget those who remain in hospital only a short while, it may not have been fully appreciated hitherto that half the patients diagnosed as schizophrenic are discharged from hospital in roughly five months. For manic-depressive illness the median duration of stay is six to eight weeks: this is so for all but the youngest group of men, in whom it is slightly longer.

To claim improved treatment or more effective case management it is necessary to show that higher proportions are discharged after stated intervals of time. A claim that a majority of schizophrenic patients were discharged in five months after some new treatment would clearly not imply any advance over present methods of management and current expectation, unless other evidence, such as greater ease of management,

TABLE I.—Duration of Stay in Mental Hospital for Patients Admitted in 1953, by Sex, Age, and Diagnosis. The Duration of Stay is Given as Months Within which the Relevant Proportion of Patients were Discharged

		Age	Percentiles								
			20%	30%	40%	50%	60%	70%	80%	90%	100%
Schizophrenia											
Men	{	10-19	2.0	3.0	3.9	4.8	5.5	7.9	12+		
		20-24	1.6	2.8	4.0	5.1	6.5	9.7	12+		
		25-34	1.6	2.5	3.6	4.8	6.2	7.3	12+		
		35-44	1.4	2.3	3.5	5.2	8.3	12+			
		45-54	1.3	2.1	3.4	5.3	9.0	12+			
Women	{	10-19	2.0	2.8	3.7	4.5	5.4	7.2	12+		
		20-24	1.6	2.6	3.6	4.7	5.8	8.2	12+		
		25-34	1.5	3.4	4.7	5.9	8.9	12+			
		35-44	1.5	2.2	3.2	4.6	6.0	10.4	12+		
		45-54	1.8	2.7	4.1	5.8	9.4	12+			
Manic Depressive											
Men	{	10-19	0.6	0.9	1.5	2.5	4.3	5.9	8.6	12+	
		20-24	0.6	0.9	1.4	1.9	2.4	2.9	4.4	6.2	12+
		25-34	0.6	0.8	1.1	1.5	1.9	2.6	4.1	7.4	12+
		35-44	0.6	0.9	1.3	1.6	2.0	2.6	4.0	6.9	12+
		45-54	0.7	1.0	1.4	1.7	2.2	2.9	4.8	9.1	12+
Women	{	10-19	0.6	0.8	1.1	1.4	1.7	2.2	4.4	10.2	12+
		20-24	0.6	0.8	1.2	1.6	2.1	2.8	4.5	7.6	12+
		25-34	0.6	0.8	1.2	1.6	2.0	2.8	4.4	7.4	12+
		35-44	0.7	1.0	1.4	1.7	2.2	3.0	5.0	9.3	12+
		45-54	0.8	1.2	1.6	2.0	2.6	3.8	5.6	12+	
Psychoneurosis											
Men	{	10-19	0.6	0.9	1.3	1.8	2.4	3.1	4.7	6.5	12+
		20-24	0.4	0.7	0.9	1.2	1.6	2.1	2.9	5.6	12+
		25-34	0.5	0.7	0.9	1.3	1.6	2.0	2.9	5.2	12+
		35-44	0.5	0.7	1.0	1.3	1.7	2.3	3.1	5.6	12+
		45-54	0.6	0.8	1.1	1.5	1.8	2.4	3.4	6.0	12+
Women	{	10-19	0.5	0.8	1.1	1.6	2.2	3.3	5.3	10.3	12+
		20-24	0.5	0.8	1.0	1.5	2.0	2.8	4.3	5.9	12+
		25-34	0.5	0.8	1.0	1.4	1.8	2.3	3.2	5.5	12+
		35-44	0.6	0.8	1.1	1.5	1.9	2.4	3.5	6.1	12+
		45-54	0.6	0.8	1.1	1.5	1.8	2.4	3.7	7.3	12+
Behaviour Disorder											
Men	{	10-19	0.5	1.2	1.9	2.7	3.9	5.2	7.8	12+	
		20-24	0.3	0.9	1.3	1.8	2.5	4.6	5.9	12+	
		25-34	0.5	0.7	1.0	1.5	2.0	2.9	5.0	9.8	12+
		35-44	0.5	0.7	1.0	1.4	1.9	2.7	4.3	8.3	12+
		45-54	0.6	0.8	1.1	1.6	2.1	3.0	5.4	12.0	12+
Women	{	10-19	1.0	1.5	2.1	2.9	4.1	5.3	7.6	12+	
		20-24	0.5	0.8	1.3	2.0	3.1	5.0	9.7	12+	
		25-34	0.5	0.8	1.2	1.9	3.0	4.7	7.2	12+	
		35-44	0.7	0.8	1.2	1.8	2.6	4.2	7.1	12+	
		45-54	0.8	1.2	1.6	2.1	3.0	5.6	8.9	12+	