renal function can usually be arrested, and the condition of some patients may even improve, though all are left with substantial renal damage.

Koutsaimanis and de Wardener note that three of their patients deteriorated after surgical operations. They suggest that the fall in total blood flow through the kidneys owing to the anaesthetic and to loss of blood may combine with the local reduction in medullary blood flow brought about by antidiuretic hormone to produce critical ischaemia and necrosis of damaged papillae. This effect should be distinguished from the transient postoperative rise in blood urea that is often seen in patients with chronic renal failure and may be attributed to increased protein catabolism and diminished fluid intake. Dehydration alone may precipitate papillary necrosis in infants, and experimentally it facilitates the development of this lesion in animals given mixtures of phenacetin and salicylates. Clearly when operations are carried out on these patients scrupulous care is needed to ensure that hypotension is avoided and adequate hydration is maintained.

The relative roles of phenacetin and salicylates in causing analgesic nephropathy have been debated. This is because most patients have taken mixtures of the two, and it has proved much easier to produce papillary necrosis experimentally with salicylates than with phenacetin. Koutsaimanis and de Wardener note that, despite the fact that the consumption of salicylates greatly exceeds that of phenacetin, only five patients have been described who developed papillary necrosis after taking salicylates alone. Experimental evidence obtained in rats may not be applicable to man, and the impressive epidemiological evidence which they review indicates that phenacetin is the most important factor. Simultaneous ingestion of salicylate and dehydration may aggravate the harmful effects of phenacetin.

Recently reports have linked an excessive intake of phenacetin with an increased incidence of tumours of the renal pelvis. Again, the evidence is not conclusive, but it adds weight to the suggestion that phenacetin should not be sold without a prescription.

Bell's Palsy and Surgery

Bell's palsy is the name given to a neuromyopathy of the seventh cranial nerve. It may be defined as a palsy of sudden onset, of lower motor neuron type, affecting one side of the face, and with no other evidence of aural or neurological cause.

Most measures advocated for treating it have been based on tradition alone and have included vasodilators, stellate ganglion block, steroids, surgical decompression, and masterly inactivity. However, treatment should logically be based on a consideration of pathogenesis, clinical findings, and investigations.

The aetiology is unknown, but the accepted view is that an arterial or arteriolar disturbance is followed by swelling of the facial nerve proximal to the ischaemic segment. The nerve damage, either reversible physiological block (neuropaxia) or degeneration of the facial nerve (axonotmesis or neurotmesis), is caused by ischaemia secondary to the compression. The prognosis depends on the nature of the lesion, the chances of full recovery being good after physiological block but poor after degeneration of the nerve.

Fortunately more than 80% of patients recover completely within a few weeks, and many show signs of returning movement as early as ten days after onset even without treatment. The most valuable means of assessing the chances of recovery are various electrical tests. The value of the nerve excitability test introduced by E. D. R. Campbell and colleagues lies in its reliability and simplicity. Its important feature is its ability three to four days after the onset of paralysis to detect signs of nerve degeneration and to differentiate between a conductive block lesion and nerve degeneration. This reliability has recently been confirmed.

Surgical decompression, since its introduction by C. Balance and A. B. Duel in 1932, has become a controversial procedure. A review of the literature shows no evidence that surgical treatment exerts a favourable influence on the course of this disorder. Experienced otologists do not agree on the time and indications for such an operation. Three arguments against the value of decompression are cited. Firstly, once degeneration of the nerve has begun, decompression cannot help. Secondly, the lesion may be proximal to the site of operation and so cannot be affected by decompression. Thirdly, decompression cannot influence defects of reinnervation.

The aim of surgical treatment is to prevent nerve degeneration by operating on unfavourable cases during the critical period or the period of impending nerve degeneration. If the nerve is decompressed it remains difficult to know whether improvement will result or whether the outcome will be any better than medical treatment, because not all the cases operated upon recover completely. J. Groves in a personal communication to Henry Miller found five operated cases to do worse than a similar group declining surgery. D. Taverner and colleagues with special experience have

shown how to prevent denervation of the facial nerve by injections of corticotrophin (ACTH) for ten days soon after the onset of palsy.

Surgical decompression is painful and requires considerable experience for its safe performance. It still remains a controversial procedure.

Airborne Transmission of Smallpox

For nearly a hundred years the aerial spread of smallpox virus has been one of the great medical controversies. It is generally accepted that the person suffering from smallpox does not become infectious until just before the first macules of the exanthematous rash begin to appear. At this stage the lesions on the mucous membrane of the upper respiratory tract are breaking down and releasing large quantities of virus into the air. Epidemiologically it has been shown that the patient is most infectious in the early eruptive stage of the rash and that coughing increases the volume of virus expelled.

Extensive studies have shown that most patients with smallpox are infected either by "face-to-face" contact or by contact with infected fomites. As the person suffering from smallpox is likely to be ill when he becomes infectious, it has been thought that with adequate isolation there is little danger of the spread of the disease. Yet in the past during several outbreaks cases of smallpox have occurred where no possibility of contact could be established. Such cases were often in the neighbourhood of smallpox hospitals or in different parts of passenger liners. Although many experts accepted aerial convection as a possibility, it was considered that the hypothesis was probably incapable of direct proof. But now an outbreak in Meschede, Federal Republic of Germany, would appear to indicate fairly conclusively that aerial transmission of smallpox does occur under certain conditions. Although it is a rare event, it has a special importance to epidemiologists and hospital administrators.

A German electrician recently returned from Karachi was admitted to the isolation ward of a large general hospital with pyrexia and suspected to be suffering from typhoid fever. Four days after admission a rash appeared, and two days later, when the diagnosis of smallpox was confirmed, he was transferred to a smallpox hospital. In spite of fairly rigorous isolation of the patient, and immediate immunization of all the staff and patients in the general hospital, 20 cases of smallpox occurred, with four deaths. The patient never left his cubicle during the six days he was in the hospital and had no contact with the other patients who contracted the disease. One of the infected persons was a visitor who spent only 15 minutes in the entrance hall talking to a physician. Another case was one of the nursing sisters who had been ill for some time in the top floor of the hospital and had not left her sickroom during the whole sojourn of the original case. The distribution of the cases in the various parts of the hospital together with a smoke test of the air movement in the building under similar atmospheric conditions strongly suggested aerial convection.

The evidence in the Meschede outbreak is fairly conclusive, but whether it can be considered sufficient to give plausibility to airborne transmission over long distances must remain a matter of conjecture. Nevertheless, the outbreak shows that smallpox is an ever present risk to any general hospital, especially in these days of popular air travel. The safeguards must be, firstly, a well-immunized hospital staff, and, secondly, a sound isolation procedure for all cases of undiagnosed pyrexial illness. But probably the most important lesson of the Meschede outbreak is the need to consider carefully the sitting of isolation accommodation if it is to be part of a main hospital building, and for some regard to be paid to the movement of air currents in hospitals. Although aerial convection of virus particles may be uncommon, the insistence of our predecessors in keeping isolation accommodation separate may merit some reconsideration by our hospital planners.

Depression and Oral Contraception

There is now a sufficient body of evidence to establish a relationship between the use of oral contraceptives and the occurrence of depression. The relationship is complex and depends on the physical and psychological predisposition of the woman as well as on the properties of the contraceptive itself.

Depression can have serious consequences for a patient and her family. Despite this the consensus of published opinion suggests that as many as 6-7% of women suffer depressive symptoms while taking an oral contraceptive compared to 1-2% of controls. Some attempt suicide, and in many the cause of the depression is not recognized. But since oral contraceptives are the most effective form of contraception for most women it is important to learn how to recognize those women who may be particularly at risk. Unfortunately most investigators of this problem have encountered methodological difficulties. Few studies have been prospective, and adequate controls have been hard to provide. There are also difficulties in defining and quantifying depression and in comparing the results of one study with another.

The controlled comparison reported by Dr. Brenda N. Herzberg and her colleagues in this issue of the B.M.J. (page 142) is of interest in showing by a reliable and valid subjective measure that 6-6% of women taking oral contraceptives were more severely depressed than any women in a group using physical methods of contraception. They also show that the point during the menstrual cycle at which this assessment is made is important. This has been overlooked in most studies. On the other hand they found little correlation between the type of oral contraceptive and incidence of depressive symptoms and therefore little correlation between progestogen activity and depressant effect. This finding differs from others which have shown that the greater the progestogen activity the more likely will depression be induced.

How should the prescriber try to prevent a depressive