presence of strangles streptococci arranged in their characteristic chains. These occurred at regular but comparatively wide intervals throughout the pus.

Remarks.—The case is interesting mainly on account of the apparent freedom of the animal from disease, and the absence of all other lesions. It is interesting also to note that so large an abscess in that situation should have given the owner no more marked warning during its formation.

Questions.—Was the disease one of *general* blood infection, and its conveyance to the brain by that channel? Or did the infection of the brain take place by way of the lymph vessels through the cribriform plate of the ethmoid? Personally, I am inclined to think the latter.

A FEW NOTES ON FRACTURES.

By W. CARGILL PATRICK, M.R.C.V.S., Ballinasloe.

AS fractures have been of rather frequent occurrence in my practice for some time past, I thought the following might be of some interest to the readers of your Journal.

Case I.

The subject was a twelve-years-old thoroughbred stallion, kept for stud purposes, and for which the owner refused £600 two years previously. Whilst being shown at a neighbouring town he was put in a stable to rest and feed, but it seems there was a mare in the next box, whose presence rather annoyed or excited him, with the result that he began jumping round the box, lashed out at a thick post forming part of the hay-rack, which was placed rather low, fracturing the suffraginis of the off hind leg. In answer to a summons by wire I arrived at the place, some thirty miles away, a few hours later, and on carefully manipulating the parts, could distinctly feel the bone fractured into half-a-dozen pieces at least. The animal being a valuable one, I decided to give him every chance, and I adopted the usual treatment in these cases—viz., plaster of Paris bandages, splints, etc., had him removed home in a float, administered a dose of physic, and ordered bran mashes and green food. I put him in slings the following day, but he only tolerated these for ten days or a fortnight at most, when he became so unmanagable that we were compelled to take him out of them, and give him a good, roomy, well-lit, aired, and littered box instead. The bandages were left on for about a month, when they were removed, disclosing a most satisfactory state of things. The parts had remained in the proper position, callus formation was all that could be desired, and only a small wound on the outer side of the fetlock had been caused by the bandages. This quickly healed under ordinary treatment, and everything pointed to a successful issue, which, I am glad to say, took place, as the animal was put to quiet walking exercise three months later, and has proved a most successful sire at stud since he was maimed four years ago. At present only slight lameness remains; in fact, had he been a gelding, he would have been workably sound.

Case II.

A bay six-years-old hunter, which had just been handed over to the groom in the hunting field, as he was too much of a handful for the lady who rode him, bolted, and fell in a ditch on his back, where he lay for some time, owing to the narrowness of the place and the awkward position he was in, and battered his head against a stone in the bank, causing fracture of the frontal bone. He was led home quietly and put in a comfortable loose-box, but appeared unable to eat or drink, and very sorry for himself generally. The owner, however, decided to wait until the following morning, hardly expecting him to live throughout the night. Next morning he was found in much the same condition, when the owner wired for my immediate attendance to see what could be done. On arriving about 10 P.M. that night, nearly thirty-six hours after the occurrence, I found the horse standing in a corner of his box in a semi-comatose condition, snoring loudly, as the head and nostrils were much swollen, mouth partially open, and the tongue protruding slightly. He had hardly moved out of the one position from the previous evening, and when he was made to do so he had a straggling, insecure gait. The seat of injury was more or less depressed, but there was no surface wound present. The horse was bled and a dose of physic administered. Cocaine was applied round the seat of fracture, and a large circular piece of skin was removed, when a depressed, starred, or radiating fracture of the frontal bone at the upper end of the sinus presented itself. The frontal was trephined at once, several splinters or plates of bone were removed from both frontal and ethmoid, and the parts were thoroughly cleansed, thus affording almost instant relief, as the tongue was retracted shortly afterwards, and the animal partook of a drink and some bran mash, appearing ever so much brighter than he was prior to the operation.

The after-treatment consisted in keeping the parts well syringed with a Read's pump, using a solution of creolin and chinosol, in combination with boracic acid powder by insufflation, removing sundry small plates of bone as they became loosened, keeping the wound open until all smell had completely disappeared, and then allowing it to fill up by granulation afterwards. The usual attention to diet, fresh air, etc. Complete recovery took place ten weeks after the accident.

Case III.

A black three-years-old mare, used for hack purposes, when going along the avenue with groom riding, stumbled, and fell on her nose, fracturing the premaxilla, knocking out two of the temporary incisors, yet hardly even blemishing her knees, merely knocking off the hair. On examining her mouth I found the incisors knocked out as stated above, longitudinal and transverse fracture of the premaxilla, and depression of fractured part, allowing the teeth of the upper jaw to cut into the gum behind the lower incisors. The transverse fracture was right across the jaw, complete; the longitudinal one was between the central and lateral incisors, and had a communicating surface wound. Several small splinters of bone were removed, the parts thoroughly cleansed, lateral and corner teeth wired to central permanents, then jaw bandaged, and an improvised mouth-plate affixed

in order to keep the parts in position. However, as the instrument in question left much to be desired, Huish's "Revelation" mouth gag, with the rubber or leather covered plates, suggested itself to me as being more suitable for the case, so I adopted its use, and found it to be a perfect instrument for the purpose. The parts were kept in proper position, equal pressure was attained by using the gag, the mare was at the same time prevented from using her teeth and displacing them while under treatment. The mouth was thoroughly and regularly washed with creolin after feeding, and the gag re-applied, until recovery took place.

The mare was sent home five weeks later, having made both a speedy and thorough recovery, leaving hardly any trace of the injury except a slight retraction of the gums, which in our patients does not constitute a serious defect or blemish.

A CASE OF QUARTER-EVIL IN A THREE YEAR OLD BULL.

By SYDNEY L. STEPHENS, M.R.C.V.S., Wadebridge.

A STATEMENT in a recent number of your Quarterly that quarter-evil is exceedingly rare in adult cattle induces me to report the following case.

Subject.—A valuable pedigree Devon bull in show condition, and aged three years seven and a half months.

History.—Had served a cow previous day, and had "got off" clumsily. Found lying down in morning. At mid-day showed lameness in left fore leg, with shoulder swollen. No appetite or rumination.

On the evening of this day (July 8th) I was called, and found the swelling very painful, but *not* emphysematous, and internal temperature 106° F.

I suspected quarter-evil, and warned the owner, but the age of the animal caused me to treat for severe sprain.

Next morning revealed the swelling to be emphysematous, and the bull died the same evening of quarter-evil.

SCABIES IN HARES.

By A. M. TROTTER, M.R.C.V.S., Sanitary Department, Glasgow.

SINCE publishing notes on "Scabies in Field Rabbits"¹ there have come under my observation two instances in which hares have been attacked by the parasite—*sarcoptes minor*. These animals were found on one of the estates already referred to.

The parts involved were in,

Case I.—Lips, face, forehead, lower half of the outer surface of the auricular concha, neck, forelegs, large irregular patch measuring 4½ by 2 inches on the left side of the chest, pubis, and hind legs.

Case II.—Lips, face, forehead, neck and pubis. A large part of the

¹ "Journal of Comparative Pathology and Therapeutics," Vol. XI., p. 4.