intervals of about one-third of an inch right through the skin and cartilage, the knots of the sutures being made on the upper (hairy) side of the ear flap. The object of this is to produce a firm pressure on the internal surfaces, and also to bring the edges of the wound into contact with one another. This having been completed, and the parts again carefully dried, the whole ear is placed in a pad of antiseptic wadding and bandaged firmly to the head; a cap or net placed over this is of advantage if the animal attempts to remove it. After treatment consists in simply examining the wound once or twice daily, pressing out any fluid which may be present, and carefully drying and bandaging with dry antiseptic wadding. We found this to be a much better plan in the majority of cases than the application of antiseptic lotions or dry powders, although we occasionally resorted to these.

The average time before the bandage could be left off was ten days; in some cases all was well within a week, and in others the wound needed attention for a fortnight or three weeks. As regards the sequelæ, we only got three cases in which the ears were so thickened or bent as to cause any visible deformity, and in each of these the patient was a very troublesome one, or the owner did not follow out our instructions; excessive granulations and re-appearance of the fluid in any quantity were rarities.

I have tried a modification of this plan by suturing the two cut edges together, not passing the sutures right through the cartilage, but the results were not so successful; besides the loss of pressure there is the presence of the catgut or silk suture, which acts as an irritant on the internal surface.

CLINICAL NOTES ON RADIAL PARALYSIS.

By ARTHUR H. BERRY, M.R.C.V.S., Hospital Surgeon, Royal Veterinary College, London.

A GREY gelding, aged about eight years, was admitted into the College Infirmary, 29th August 1896, dead lame on the off fore limb. The only history previous to the sudden lameness was, that while on a journey the animal trod upon a stone with the off fore leg, stumbled, went lame for a few steps, and shortly afterwards, while on the same journey, fell suddenly dead lame, being unable to proceed any farther. He was removed from the shafts, and taken to a stable near at hand. Professional advice was called for, and the result of the examination was given as suspected fracture in connection with the shoulder.

The animal arrived at the College Infirmary in a float, twenty-four hours after the accident occurred. I assisted in his removal from the float, and, with the knowledge that it was a case of suspected fracture of the shoulder, I commenced my examination, but with a negative result. It was not until after examination and manipulation of the affected limb (off fore), and while taking my second survey of the whole limb from the animal's side, that the position of the limb struck me as typical of an illustration I had seen of radial paralysis.

While viewing the limb in profile, from the shoulder downwards, the shoulder, and more especially the elbow, appeared dropped, the elbow

being considerably below the level of the sound limb ; for this reason the condition has been termed "*dropped elbow.*" From the elbow-joint to the knee-joint the limb was advanced, the knee-joint itself being flexed ; the cannon bone was directed backwards, the fetlock-joint was flexed, and the whole limb was resting on the anterior surface of the wall of the hoof, the solar surface of the affected foot being in full view, at times perhaps only resting on the toe of the foot, though the predominating position was the former.

To endeavour to make this description of the limb clearer, which is essential, inasmuch as it is the typical position of a limb affected by paralysis of the radial nerve, I had the affected limb photographed

the day after admission, and the photograph is reproduced in the accompanying figure.

The animal evinced no pain whatever on manipulation of any part of the limb, and to see him strike and paw with his affected leg at times (he being of rather an excitable nature) one would have thought that there was nothing whatever the matter with him. The whole limb could be manipulated with ease, joints rotated in any direction with the exception of the knee joint, which could not be straightened, and the leg as a whole could not be placed in the vertical position.

By great pressure on the anterior surface of the knee joint, I with much difficulty managed to straighten the leg, but immediately I removed the smallest amount of support the knee at once became flexed, and if it had not been for the previous precaution of having hands ready to prevent his falling, he would have without doubt reached the ground. There was no heat, swelling, pain, or any local indication whatever to lead me to suspect fracture at the end of my examina-

tion. No perspiration present, no rise in temperature, and no acceleration of heart-beats or respirations. The animal did not appear distressed in any way, and would feed freely from anything that was offered him.

Another important symptom noted was the coldness of the affected limb, to which I shall again make reference.

The horse, although dead lame, could lie down and get up at will, which certainly would not have been the case from such dead lameness resulting from fracture of a bone, or from rupture or strain of muscles or tendons sufficient to produce such lameness as was present in the case in question. When moved forward on the level, which was accomplished against his will and with great difficulty, he failed altogether when called upon to place the slightest weight upon the affected limb.

The animal was supported by two men at his head, and the movement on and off the limb to the sound one was very quick, the sound limb when coming in contact with the ground being fully extended to take the whole weight off the fore part of the body. Although the amount of ground covered was not great, and he would seldom move more than one pace at a time, often several minutes elapsed before he would make an attempt for a fresh start, and then at times would give up the attempt after having tried to feel the ground.

The only suitable illustration I can think of to describe the action of the limb when brought in contact with the ground, is one with which all are familiar, and I expect one which all have experienced, viz., that of "sleepy leg," or "pins and needles" in a leg, resulting from keeping the limb too long in one position, or in an abnormal position. On suddenly rising to our feet we experience a peculiar sensation, and, in fact, in some cases it is most difficult to proceed without falling, as we seem to have lost all power and control of that limb for the time being; such appeared to be the sensation experienced by the animal in this case, that of sudden collapse of the limb when called upon to bear a portion of the body weight.

When going down an incline the movement was similar, but more guarded, and naturally very much more sliding and slipping about.

In the backward movement the affected limb was slowly drawn back during the act of retrogression, and he did not care to go more than one step at a time without resting, but occasionally would attempt two or three steps consecutively. When turned round he would move in a circular manner, making a pivot of the sound fore limb (near fore).

I had the animal placed in slings, but he could not be made to stand in them, not even so that I might have them removed. I lowered the slings to the ground, and then he refused to rise; the slings were disjointed, the girth of them remaining beneath him. Shortly afterwards he sprang to his feet, being very careful to avoid any weight being placed on the affected limb, which was kept quite clear of the ground; with difficulty he managed to reach the hay rack and commenced to feed.

I noticed that when he did move of his own accord (in a well-bedded box), although he was longer in making up his mind to start, and seemed to pick his footing better, he accomplished the step with less danger of falling than he showed when assisted at the head.

I tried the slings again about ten at night, three hours after admission, and this time he took to them kindly, and was left in them all that night.

30th August.—Remained in slings, eating well and apparently in no pain. On passing the hand from the forearm downwards, I was struck with the increasing coldness of the limb from above downwards. Placing my hand on the antero-lateral aspect of the elbow joint, the surface temperature appeared quite normal, but about the middle of the forearm a decided alteration was perceptible, and this became more decided every inch or so. The surface temperature of the skin covering the knee joint was very low and that from the cannon bone downwards, and the hoof also felt as cold as the atmospheric temperature. The skin was moderately sensitive to the prick of a needle throughout the extent of the limb, but below the knee sensation, although present, was not well marked.

The treatment ordered was slings, massage three times daily for half an hour each time, laxative diet, and salines.

3rd September.—Previous treatment continued, skin inclined to chafe over point of shoulder, eating well, surface temperature higher than on day of admission, atrophy of caput muscles visible.

5th September.—Impatient for his food, pawing and striking with the affected limb. Removed from slings on account of sore over point of shoulder caused by the slings; bearing a little weight on limb while standing, but still dead lame. Applied lead lotion to sore on shoulder.

8th September.—Replaced in slings. Point of elbow very tender, bruised through lying on it. Atrophy of caput muscles more marked. Temperature 101° .

10th September.—Progression slow but sure. Putting more weight on limb, standing upright at times. Anterior surface of knee colder to the touch. Point of elbow very tender. Gravitating swelling forming on the inner side of forearm, close to the trunk, about the size of a goose's egg.

11th September.—Doing well, bearing more weight on limb, rechafing point of shoulder through pawing with the affected fore foot in the air. Placed large pad of cotton wool between breast-plate and shoulder joint. Massage to be continued. Apply ung. zinci to sore on shoulder. Anterior part of knee and cannon bone still colder than normal.

12th September.—Removed from slings. Placed in a large loose-box well bedded with tan, and then liberally covered with short straw. The act of progression accomplished with more freedom, bearing more weight on limb and for a longer time, but still dead lame. Shoulder sores healing well. Animal eating well.

17th September.—Certainly slow improvement continues; bearing more weight on limb, and at times placing it under the body. Atrophy of caput muscles well marked.

20th September.—Movement much improved, and at present quite satisfactory; standing upright on limb at times; massage continued.

25th September.—Doing well. Appetite good, surface temperature same as that of sound limb, walking without inconvenience, limb moved naturally.

1st October.—Improving gradually, walking almost sound, marked

atrophy of caput muscles, slow exercise half an hour daily. Massage twice daily as before.

20th September.—Discharged for further rest, walking freely and perfectly sound, much to owner's astonishment. Muscles regaining tone, trotting nearly sound, every anticipation of complete soundness.

MEDIAN NEURECTOMY.

By J. TAGG, M.R.C.V.S., Darbhanga, Bengal.

THE operation of median neurectomy is not generally adopted in this country, but from the little experience I gained from three cases, I have come to the conclusion that in cases of tendonitis, enlarged fetlock joints, ringbones, etc., where other treatment has failed, it might be adopted with advantage as a "*dernèir ressort*."

Mode of Operation.—Patient thrown and chloroformed; when well under the influence of the anæsthetic, turned on to the back, with a well padded sack of straw, shavings, or sawdust on each side. Leg to be operated on taken out of the hobbles, cross hobbles put on, and the leg gently pulled downwards and a trifle backwards by a rope placed around the fetlock.

The nerve can be easily felt behind the ridge formed by the radius, in a straight line forward from the elbow joint. The part is clipped and shaved, and rendered aseptic with solution of hydrarg. perchlor. All instruments should be rendered aseptic. An incision is made through the skin about 3 inches long, then through the aponeurotic portions of the panniculus carnosus and pectoralis transversus muscles, until the fascia covering the elbow-joint and the deep lying muscles is seen. The nerve can now be felt, also the pulsation of the posterior radial artery lying in apposition to it. A pad of fat is usually seen covering the nerve and artery, and this, with the connective tissue, should be carefully dissected away until the nerve is well into view. A good plan to keep the incision well open is to place a piece of twine through the skin and muscles on each side of the incision, and tie them together in front of the leg. A tenaculum is now passed under the nerve, and a piece of cat-gut is threaded on the tenaculum and drawn under the nerve. About an inch or an inch and a half is excised. The wound is then well cleansed with an aseptic lotion, and the muscle sutured with carbolised catgut, and the skin with metallic wire. An aperture for drainage should be left in the lower part of muscle and skin.

The horse is kept as quiet as possible for six days, after which time light exercise may be given till the wound has healed.

The following is the list of cases operated upon.

CASE I. was an aged gelding, used for polo. I had treated him for sprained tendons and sesamoiditis some three months before. Treatment consisted of firing and blistering. On recovery from the firing he was put to work, and after playing at polo he went very lame, most marked on near fore.

Median neurectomy performed under chloroform; went perfectly sound on near fore after the operation; wound healed in three weeks. Dressing consisted of zinc. chlor. solution, 1-20.