Dr A. E. PETERS asked whether any serological test had been made, and whether there was any acquired immunity.

Mr M. VLASTO said he would like to know whether Mr Mollison had asked a dermatologist for a diagnosis.

Mr MOLLISON (in reply) said that he had not shown the patient to a dermatologist, because he (the patient) had not appeared at the out-patient department for a long time. The Wassermann reaction had been negative on two occasions. The only bacteriological finding was a yeast grown from the surface of the membrane on two occasions; he regarded the case as an unusual one of thrush.

PROCEEDINGS OF THE FIFTIETH ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

May 1-3, 1928.

President—Dr D. BRYSQN DELAVAN.

(*Abstracted by Dr A. Logan Turner from Dr Charles J. Imperatori's Report.*)

What is the Relation of the Thyroid Gland to the Larynx?—Dr William V. Mullin, Cleveland, said: Enlargements of one or both lobes of the thyroid may cause distortions of the larynx, and may produce, of course, the so-called sabre trachea. It may push the larynx upwards or to one side, or pull it downwards, but this has practically no effect on the voice.

Simple adenomas of the thyroid gland have absolutely no effect on the larynx or on the voice, unless we have the so-called enlargements or finger-like projections of one lobe into the pharynx, behind the larynx; sometimes we see them passing into the pharynx and dropping down over the top of the larynx.

Individuals with hyperthyroidism have hoarseness and a weak voice, but this is due to a condition of the intra- and extra-laryngeal muscles that is likened to the tremor in the hands and to the general muscular weakness throughout the body.

I believe that the recurrent laryngeal nerve bears a far more intimate relation to the œsophagus than it does to either the larynx or the trachea.

It seems that an enlargement of the thyroid gland, no matter how large, whether it extends backwards or downwards, as a substernal thyroid or intrathoracic thyroid, does not exert direct pressure on the recurrent laryngeal nerve in pre-operative conditions sufficient to cause paralysis. I have not seen one case of laryngeal paralysis that could not be accounted for by some condition in the mediastinum, and not

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one case has been due to enlargement of the thyroid gland. After an operation has been performed, however, one sees a great deal of disturbance.

We are coming now to believe that when we find a laryngeal paralysis pre-operatively, and particularly a bilateral abductor paralysis, we should look on the condition of the thyroid gland as being malignant. Thus, a bilateral abductor paralysis associated with the thyroid gland which has not been operated on, in nearly all instances, indicates a malignant condition of the gland.

On examining a considerable number of malignant thyroid glands, over 200, we have not found the larynx involved secondarily in any of them.

Dr JOHN F. BARNHILL said it had been his experience that the aberrant goitre caused more laryngeal difficulty than ordinarily resulted from a goitre in the regular position. The aberrant goitre in its early stage, that is, in infancy, caused the greatest difficulty, and, as laryngologists, we should know that a considerable number of infants died during the first hours following birth from the so-called "circular" or misplaced goitre, which really choked the child. He had made a number of post-mortem examinations on children who had died from this cause.

The other aberrant goitre sometimes overlooked, that gave rise to a great deal of difficulty, was the goitre that did not descend from its original location in the tongue to its normal place in the neck; this variety gave rise to great difficulty from hæmorrhage and difficulty in deglutition and respiration.

Dr GORDON B. NEW said that if the recurrent nerve was pinched at a point low down in the larynx, or was injured there experimentally, the dogs had trouble in swallowing and practically all died; if the nerve was injured high above the fibres passing through the œsophagus, the dogs did not have trouble in swallowing.

He did not believe that traction caused recurrent paralysis. Laryngeal paralysis was not produced in animals by long continued traction on the recurrent laryngeal nerve.

It had been his experience that in at least 95 per cent. of injuries to the laryngeal nerve, the vocal cord was in the median line or in the abductor position. If the nerve had been permanently injured, the cord stayed in that position. In the smaller percentage, approximately 5 per cent., in which the cord was in the cadaveric position, the cord would come to the median line in from three to four months.

It had been said that the patient was often hoarse after operation on the thyroid gland, but as his voice improved he had trouble in breathing. In that case, the injury to the nerve was permanent, the cord pulled to the median line and the so-called median-line abductor paralysis resulted.

Sir ST CLAIR THOMSON recalled a few occasions on which he had been consulted by patients because of change of voice in thyroid disease, and had rather congratulated himself on discovering that this was due to early myxœdema.

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American Laryngological Association

In a discussion upon recurrent paralysis in Edinburgh, in 1927, it was stated by a Swiss confrère that pre-operative paralysis with enlargement of the thyroid gland was so suggestive as to be almost pathognomonic of malignant disease.

This was not their experience in England. There were cases on record of paralysis existing beforehand and disappearing after a successful operation on the goitre.

With regard to the subject of post-operative paralysis, he had had occasion to see cases of goitre that were referred to him soon after operation, in which the cords were mobile, and yet after a few weeks (or it may have been a month or two) paresis, perhaps a complete paralysis, occurred in one cord. On investigation, it seemed to him that this occurred in those cases which did not follow an entirely aseptic course—cases in which there was perhaps prolonged drainage and some suppuration, so that the paralysis occurred from the contraction secondary to sepsis.

Foreign Bodies in the Stomach and Intestines.—Dr M. C. Myerson gave an analysis of thirty-nine cases of foreign body in the stomach and in the intestine. Thirty-two of these were pointed. Thirty-six passed through the bowel tract, while the remaining three were removed by gastrotomy. Several cases were cited to demonstrate that the presence of an open safety-pin or other foreign body in the stomach should not be a cause for alarm and that a surgical procedure should not be performed unless there was a positive indication for it. Surgical intervention should be performed, if, after observation, one is convinced that the foreign body cannot pass through the pylorus because of its size or shape, or because there is reason to believe that the pylorus is abnormally small, and this only after it has been decided that gastroscopy is not advisable or will not accomplish the extraction of the foreign body.

He cited two cases in which infants were subjected to gastrotomy, and the open safety-pin was not found in the stomach. At a later date the pin was passed in the stool. He made a plea for conservatism and careful waiting with the aid of the fluoroscope, when a case was presented with a foreign body in the stomach.

Dr CHEVALIER JACKSON said that the presentation of Dr Myerson represented the practically unanimous views of œsophagoscopists, of those who saw most of these cases and had to reach a decision as to what was to be done.

As to the question of gastroscopy, it arose in the case of every infant who was discovered to have a foreign body in the stomach. The question was raised as to whether we should perform gastroscopy or not. We used to think it better to wait. We encountered a number of cases in which we were sorry we did wait. Our rule now was not to wait very long. We used to wait a month, now we waited only a few days, or a week, to determine whether or not the foreign body was going to pass out of the stomach. The question as to whether or not it would be a relatively safe

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passage through the intestinal canal must be decided immediately. If the body was a long needle, pin, or an open safety-pin, a gastroscopy was usually performed at once. One of the most important points to consider was whether it would pass the bend of the duodenum. That was the most dangerous point for two reasons: First, the sharp turn was likely to arrest the foreign body, especially if it was an open safety-pin. The other reason was that if arrested and operation was required, the duodenum was the one region in the abdomen where the surgeon hesitated to operate for foreign body, especially in an infant.

Because of his study of the physiology of the intestinal canal, the roentgenologist was, in Dr Jackson's opinion, the best man to decide in a given case, whether or not gastroscopy should be performed.

Any foreign body opaque to the X-ray, that had gone down through the mouth and œsophagus into the stomach, could be removed by the same route from the stomach by gastroscopy. Gastroscopy, for its successful and prompt performance, required the use of the double plane fluoroscope; without it, it required a long time with the gastroscope before the foreign body would be found, unless the gastroscope was long, like a stomach tube. Therefore, for quick localisation, the X-ray was required. If one wished to turn a safety-pin—to do an endogastric version—or if one wished to close the pin, the use of the double plane fluoroscope was required. It was dangerous to go into the stomach with a gastroscope and forceps and try to deal with a foreign body, working only in one plane. It was possible to be 2 or 3 inches (5 or 7 cm.) posterior to it.

The Embryology and Neurohistology of Sphenopalatine Ganglion Connections: A Contribution to the Study of Otalgia.—Dr Ralph A. Fenton and Dr Olof Larsell pointed out that the study of otalgia of sphenopalatine origin had been disappointing to Sluder, Müller, Terracol, Bertein and others, who had been handicapped by the difficulty of obtaining proper material. The anatomical pathway for the sensory impulses, erroneously ascribed to sympathetic fibres incapable of such function, was partially worked out in Ramsay Hunt's clinical studies of herpes oticus, 1907-1915, though he was unable to secure actual anatomical proofs.

The authors, accepting the sphenopalatine as a sympathetic ganglion with characteristic multipolar cells, pointed out its origin in comparative anatomy along the course of the palatine branch of the primitive seventh nerve. They also emphasised the fact that lower forms of life showed numerous physiologically different sets of nerve fibres, readily traceable by size, myelin sheathing, etc., in the seventh, ninth, and tenth cranial nerve trunks, and to a lesser degree in the fifth. Thus the fifth and seventh nerve trunks were much alike in lower vertebrates, while in mammals reapportionment of function left the fifth largely sensory and the seventh largely motor.

Although they pointed out that the sphenopalatine ganglion cells, sympathetic in character, received small preganglionic fibres through

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the great superficial petrosal nerve, the authors demonstrated numerous large medullated fibres of the sensory type which ran through the sphenopalatine and great superficial petrosal to reach cells in the geniculate ganglion; these sensory fibres came from palatal and nasal distribution.

Confirming Ramsay Hunt's clinical studies and Rhinehart's work on the mouse, Larsell and Fenton had found in the human fœtus a small facial branch distributed through the auricular branch of the vagus to the posterior part of the auditory meatus and tympanic membrane and to the cranial surface of the concha and skin over the mastoid. Its fibres rose from cells in the geniculate ganglion.

The great superficial petrosal nerve might be considered a mixed trunk, consisting of a white ramus communicans plus the palatine seventh. The geniculate ganglion, into which the cutaneous auricular branches of Rhinehart passes, was a sensory ganglion containing unipolar cells of the usual craniospinal sensory type. Large myelinated fibres from the palatine distribution were traced by the authors through the sphenopalatine ganglion without interruption into the great superficial petrosal nerve and then to cells of the geniculate ganglion.

Larsell and Fenton thus established the conditions needed elsewhere in the body for reference of pain from a visceral region to a body surface. Irritation in the sphenopalatine region stimulated the palatine seventh fibres through the great superficial petrosal to cells in the geniculate ganglion; these cells were directly related to adjacent cells from the fibres of the cutaneous branch of the facial nerve, described by Rhinehart, transferring the pain impulse to the auricular and mastoid region supplied by this nerve.

Further work on the deep petrosal sensory tracts, carotid plexus, and vagus and glosso-pharyngeal connections was in progress and might throw some light on asthma, allergic and anginal phenomena.

Ethmoiditis in Infants and Young Children with Accompanying Eye and Orbital Complications.—Dr Clement F. Theisen had studied thirty-one cases of ethmoiditis observed during the past few years in private practice and in the Infants' Hospital, St Margaret's Hospital for Infants, and the Child's Hospital. Etiologically, large tonsils, and particularly adenoids, seemed to predispose the older children of this group to attacks of sinusitis, without doubt, because they were more susceptible to attacks of rhinitis than children without adenoids.

The diagnosis of sinusitis in all cases was based largely on the roentgenograms, particularly in the young infants and children, as nasal examinations were not always satisfactory in the very young. The cases with ocular and orbital complications were considered

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secondary to the involvement of the ethmoid, even without confirmation by roentgenograms.

With the exception of a few cases in which the tonsils and adenoids appeared to be followed by a cure of the sinus condition, he could not determine positively that these operations modified the existing involvement of the sinus in the other cases to any appreciable extent.

He had found that in the majority of the cases of ethmoiditis in young children, conservative nasal treatment directed to good drainage would suffice. The danger of post-operative meningitis was greater in young children than in adults, and could easily follow injury to the lamina cribrosa.

He advocated the utmost conservatism in the treatment of infants and very young children for ethmoiditis. Until all conservative methods of intranasal treatment had been carried out, radical surgical procedure should not be employed on the ethmoid sinus except in cases in which there was evidence of external rupture and severe ocular and orbital complications or other severe systemic conditions. He had come to view all cases of persistent nasal discharge in young children and infants, in the absence of acute nasal colds, as suggestive of sinusitis; in children under 4 years of age, probably ethmoiditis.

A persistent nasal discharge occurring with and after scarlet fever, measles, or diphtheria, he believed, was nearly always an indication of involvement of the sinus.

Dr Ross Faulkner said that, about ten years ago, almost every case of orbital complication from a sinusitis in children that came into the hospital with which he was connected was regarded as a case for an emergency operation. The patient was operated on almost immediately. These patients would come in with exophthalmos and swollen lids and with a high temperature, and they would be put into the operating room within twenty-four hours.

He claimed some credit for changing that order of things. These cases were rarely urgent enough to necessitate operation. Like every other acute suppurative process, if there was time to wait until nature supplied some local immunity or promoted some barrier around the acute suppurative process, the operation could be performed with much more safety. By waiting a short period, this operation could be performed in a conservative way and with comparative safety.

An absolute fixation of the eyeball was perhaps more important than the exophthalmos. The former probably indicated that the ethmoids must be opened.

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Austrian Otological Society

AUSTRIAN OTOLOGICAL SOCIETY.

Proceedings of Meeting of May 28, 1928.

(*From the Monatschrift f. Ohrenheilkunde*, October 1928.)

Abstract of Proceedings by A. R. TWEEDIE, F.R.C.S.

Facial Paralysis during Acute Otitis Media—L. HOFFMANN.—Boy, aged 10, had acute otitis media (left) commencing 18th April 1928, for which paracentesis was performed three days later. Profuse flow of secretion followed and the temperature fell from 38.5° C. to normal. Four days later there was sudden, complete left facial paralysis. Taste and movement of the velum were unaffected, but pain in the ear, tenderness over the mastoid, and profuse otorrhœa were present; hearing was reduced to C.V. air conduction.

In spite of the unfavourable conditions, the sudden onset of complete paralysis was regarded as rheumatic in origin. The following day there was marked improvement of the local symptoms and gradually the paralysis recovered.

At the present time the ear is completely healed and only a slight paresis of the left eyelid remains. The exhibitor drew attention to the fact that the diagnosis of sudden, complete facial paralysis was regarded as "rheumatic" in origin in accordance with Neumann's teaching, and that this view has been confirmed as correct by the subsequent course of events.

Extraordinary Rapid Repair of a Large Defect of the Tympanic Membrane—L. HOFFMANN.—Patient was an infant on whom paracentesis had been performed on the 3rd May, for relief of a typical acute otitis media. A week later, as the otorrhœa was so profuse, the ear was irrigated, when the lotion passed into the nose and was swallowed by the child.

Examination then revealed that the defect involved more than half of the membrane and that the mucous membrane of the middle-ear was slightly swollen.

Nine days later the ear was dry and the tympanic membrane completely restored, the defect being merely represented by a small scar. The exhibitor argued, therefore, that an unfavourable prognosis was not always necessary in these cases.

Acute Otitis Media: Mastoiditis: Congenital Atresia of the Meatus—E. SCHANDLER.—Girl, aged 23, who had suffered from mumps, measles, and chicken-pox during infancy, and iritis at the age of 15, was taken ill on the 21st March 1928, complaining of severe headache, giddiness, shivering, and presumably fever.

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22nd March.—Temperature 38.6° C.: 25th March, severe pain behind the right ear: 27th March, was admitted to hospital. Temperature 39.6° C.; pulse 120.

Examination of right ear showed atresia of the meatus dating from birth, since when this ear had been totally deaf; hypoplasia of the auricle; extreme tenderness of the whole mastoid process.

Left ear was normal.

No spontaneous nystagmus was present.

Rotation test:—Head erect, rotation to R. 45 "jerks," to the L. 50 "jerks."

Face downwards, rotation to the R. 45 "jerks," to the L. 29 "jerks."

Rotation with head on the shoulder not tested owing to the condition of the patient. The condition of the ear, the teeth, and the unequal size of the pupils suggested lues, whilst from the general condition and history, the diagnosis of recent influenza was made.

28th March.—Slight giddiness; frontal headache; temperature 38.5° C. X-ray examination revealed aplasia of the os tympanicum; moderately cellular structure of mastoid, the cells reaching into the squamous bone and also forwards into the neighbourhood of the external meatus, and backwards over the sinus. No definite sign of bone affection was present and the sinus was in normal position.

29th March.—Generally improved; mastoid process less tender; very slight headache, no giddiness; temperature 33.6° C. Cerebro-spinal fluid was normal.

30th March.—As blood examination revealed no cause for the continued temperature, and as pus from the mastoid process afforded a vigorous growth of hæmolytic streptococci, operation was undertaken, when the following condition was found:—Normally developed mastoid process; cortex thin; the first blow of the chisel evacuated fluid pus which extended throughout all the cells. One cell group extended over the situation of the meatus into the root of the zygoma, from which position one located with the probe, about the site of the attic, a cavity the size of a small pea, which reached forwards into the tube, but was bounded towards the area of the tympanum by bone.

The position of the horizontal canal appeared unusually deep.

12th April.—Wound almost closed. Patient discharged from hospital in excellent general health.

Chronic Suppurative Otitis Media (Left): Cholesteatoma: Necrosis of the Labyrinth: Operation; Recovery of Facial Paresis—E. SCHANDLER.—Male, aged 25, had suffered from occasional left otorrhœa since measles at the age of 2 years. Otorrhœa has continued for the last three years.

Since the 7th January 1928, giddiness, headache, pain in the left ear, but no fever, have been complained of.

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Examination showed nose and pharynx normal.

Right ear, "dry" perforation in postero-inferior quadrant.

Left ear has profuse purulent secretion; no external tenderness; meatus very narrow. A polypus surrounded by recent granulations. No view of fundus is possible.

Hearing in right ear, conversation at 3 metres: whisper at 1 metre.

Left ear, note A. is heard by voice.

Weber to the right. Spontaneous nystagmus to the right; no fistula symptom.

Rotation to the right, nystagmus 26 secs.; to the left, nystagmus 30 secs.

X-ray examination shows mastoid process is not pneumatic; antrum moderately enlarged; roof of antrum posteriorly not outlined; bone over lateral sinus normal. Sinus is displaced forwards.

12th January —Patient vomited during the night, during which blood and cholesteatomatous material were discharged from the ear. Mental condition is normal; no fistula symptom. Fundus of both eyes normal.

As the condition did not improve, the patient was admitted to hospital on the 10th April, with the report that on the 2nd April he had had severe headache on the left side, and that since the 4th April he had suddenly developed paralysis of the left facial nerve.

On examination, the facial paralysis was found to be complete and involved all three branches.

11th April.—Operation under a local anæsthetic. Mastoid process was sclerotic; granulations in antrum and attic; cholesteatoma in the antrum. Radical operation was followed by labyrinth operation, when the granulations were found over the horizontal canal, extending into and filling the vestibule.

17th April.—Facial paralysis markedly improved.

31st April.—Patient discharged with improvement in the buccal branch of the facial nerve, but the paralysis of the orbital branch still remained unaltered.

Bilateral Hennebert's Fistula Symptom with Vertical Nystagmus on Simultaneous Compression — M. TAMARI. — A girl, aged 28, reported at the hospital with the history that since early childhood she had suffered from continuous bilateral otitis media. Six years ago, on account of deafness, she had the posterior ends of the inferior turbinals removed in another hospital. In October 1922 she had been treated in an Eye Hospital for keratitis parenchymatosa. At that time the Wassermann reaction was negative, but the luetin test was positive; therefore treatment was carried out with the combination of mercury and salvarsan, which led to an undoubted improvement of the corneal opacities and vision.

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For the last two years she had suffered from tinnitus and giddiness. The tinnitus was continuous, but the giddiness occurred chiefly in the dark or in connection with sudden movement of the head or body. For the last year and a half there had been rapid increase of the deafness, especially on the left side. Inspection of tympanic membrane on each side revealed a large central perforation with opacities in the posterior portion.

Hearing: Left ear, complete deafness for speech and tuning forks; right ear, whisper 1½ metres; conversation at 3 metres.

No spontaneous nystagmus; no nystagmus induced by movement of the head.

Rotation to the left, nystagmus to the right 12 secs. with typical by-pointing.

Rotation to the right, nystagmus to the left 10 secs. without by-pointing.

Caloric reaction was not tested on account of the dry perforation.

Galvanic reaction with 2.5 m. amps. revealed horizontal rotatory nystagmus with typical by-pointing and dizziness on each side.

Air compression on each side evoked a typical, marked rotatory nystagmus, but the response to aspiration was negative.

By simultaneous bilateral compression, carried out by means of a Y-formed rubber tube, a vertical nystagmus upwards was induced with transient dizziness.

Otological Condition in a Case of Carcinomatous Leptomeningitis of the Cerebellum—E. RUTTIN.—Woman, aged 66, was referred on 4th April 1928 to the exhibitor with the diagnosis of tumour of the brain, for further examination, with the following history. She was always healthy until seven weeks ago when she felt shivery and sleepy, accompanied by loss of appetite, vomiting, and headache. Presumably she also had an attack of giddiness. Since then her hearing had been depreciated on both sides, whilst she had suffered from tinnitus for some years.

Examination showed the left ear with tympanic membrane normal; deaf for speech and tuning forks; Weber not lateralised; bone conduction much shortened. Caloric reaction at 18° C. after three minutes; no nystagmus. Thereafter typical by-pointing with both arms to the left; no giddiness, no vomiting, and no discomfort; left facial paralysis.

Right ear showed tympanic membrane normal; conversation at 3 metres; whisper at 1 metre. Rinné positive; bone conduction shortened; caloric reaction at 18° C. after 15 secs.; typical but weak nystagmus lasting 45 secs. Therewith typical by-pointing to the right with both arms. No giddiness, no vomiting, no discomfort.

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Spontaneous vertical nystagmus. Rotation tests:—

Rotation to the right, head erect, nystagmus to the left, 6 secs.
Rotation to the left, head erect, nystagmus to the right, 6 secs.
Rotation to the right, face downwards, nystagmus to the left, 4 secs.
Rotation to the left, face downwards, nystagmus to the right, 4 secs.
Rotation to the right, head on right shoulder, vertical downward nystagmus, 3 secs.
Rotation to the right, head on left shoulder, vertical upward nystagmus, 2 minutes.
No discomfort produced; no head or body reaction.

Diagnosis was made of a lesion of the auditory nerve on each side; total deafness on the left side; a lesion of vestibular nerve on both sides.

The otological condition suggested the probability of a basal affection. ? Lues.

The patient died and the post-mortem examination revealed a superficial carcinomatous infiltration over both cerebral hemispheres, the primary growth being apparently in the pancreas.

ABSTRACTS

THE EAR.

On the Occurrence of Gaucher Cells in the Petrous Bone with Remarks on the Causal Genesis of Otosclerosis. H. BRUNNER, Vienna. (*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xxii., Heft 1.)

A case is described of Gaucher's splenomegaly in which death ensued; on microscopic examination of the petrous bone a patch of typical otosclerosis was found, with, in addition, Gaucher's cells in large numbers in the reticular medullary spaces of the bone. The case seems to be a unique one. Tinnitus developed in 1916, pain in the ear in 1923 with ordinary acute otitis. A considerable amount of dullness of hearing followed. The patient subsequently developed a condition suggestive of typhoid, with extreme enlargement of spleen and liver.

Comparing and contrasting otosclerosis, Gaucher's disease and osteitis deformans, the writer finds this in common, that their development depends on a disturbance of metabolism. In Gaucher's disease it concerns the cerebroside (cerasin), in osteitis deformans the calcium metabolism, in otosclerosis nothing that is definitely known. The petrous bone differs from other bones in that, owing to the early

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