nent opening in the drum-head, exposing the stapes to view, division of the stapedius tendon, leaving the stapes to move freely, as a plunger, in its niche and the application, to the head of the stapes, with a supporting bearing upon the edge of the perforation in the drum-head, or upon the promontory, of a disk of stiff, sized paper, presenting to the sound waves a receptive surface of from four to ten or more times the superficial area of the base plate of the stapes, has effected a gradual mobilization evidenced by a progressive improvement in the hearing; in some of the cases thus studied it was necessary, in the earlier stages of the experiment, to resort to the direct application of the sound waves, but, in the majority of the selected cases, the sound waves of ordinary causation sufficed.

With a due appreciation of the proper apportionment of the motive force to be applied, and with a proper estimation of the injurious effects upon the perceptive organ of continuous loud sounds, coupled with a study of the accumulating records of various observers, it will be possible to release this subject from the bonds of clinical empiricism and place it upon its true basis as a therapeutic measure.

This much may be at least taken for granted, that the application of the major force exercisable by the majority of aural massage instruments is objectionable and that such instruments should be used only under careful observation of their immediate effects, that phonomassage, of mechanical production, where abounding in metallic overtones, is objectionable because of its fatigue effect, and that the use of sound waves judiciously applied, with a sufficient knowledge of the existing aural condition, is a valuable supplement to the mechano-therapeutics of the ear.

In conclusion it may be said that application of sound waves to the ear for therapeutic purposes is the application of a form of massage commensurably proportionate to the delicacy of the sound transmitting structures of the middle ear and labyrinth.

That the prolonged use of tones of excessive amplitude and very low or very high pitch, whatever their beneficial mobilizing effect upon the sound transmitting apparatus of the middle ear may be, are open to the objection of their prejudicial effect upon the organ of perception.

That mechanical reproductions of speech are open to the objection of their accentuation of overtones and their presentation of a distortion of a familiar sound picture, that of the normal voice.

That the natural voice concentrated upon the ear is, both in its range and its volume, as well as in the more general exercise afforded by its complexly compounded sound waves and the readiness with which it may be uniformly applied, the safest and, in the end, the best form of sound source for phonomassage of the ear.

CHOLERA.—It is reported that cholera has appeared at Manila, but no anxiety is entertained.

A METHOD FOR THE DIFFERENTIAL STAINING OF BLOOD PLATES.

BY JAMES HOMER WRIGHT, MD., S.D.,

Director of the Pathological Laboratory of the Massachusetts General Hospital; Instructor in Pathology, Harvard Medical School.

IN a recent paper upon "The Origin and Nature of the Blood Plates," published in this JOURNAL,¹ I described the results obtained by means of a special staining method for these corpuscles, but I did not describe the method in detail.

I have recently improved it in some particulars and it may be now described as follows:

Fixation of perfectly fresh tissue in methyl alcohol; dehydration by acetone; clearing by xylol; imbedding in paraffin. Sections of 2μ thickness, for thicker sections do not give the best staining reactions.

Staining.—The sections are stained while affixed to a coverglass by Wright's blood staining fluid² in the same manner as a blood smear.

1. A sufficient quantity of this staining fluid is placed on the coverglass to cover it and then an equal quantity of water is added to the staining fluid drop by drop. The mixture remains on the preparation ten minutes.

2. Rinse in water.

3. Immerse in a 1 to 5000 aqueous solution of sodium hydrate for five seconds.

4. Wash in water.

5. Dehydrate with acetone.

6. Clear with oil of turpentine.

7. Mount in turpentine colophonium.

A most important feature of the method is the use of acetone and oil of turpentine in dehydrating, clearing and mounting, for these do not destroy the characteristic staining as do other similar reagents that I have experimented with.

The spleen of a young kitten is the most favorable object for the demonstration of the characteristic staining and structure of the blood plates and their origin from the giant cells as described in my paper referred to above, because this organ in this kind of animal contains many giant cells and also very many blood plates which are especially large in the cat.

Because the blood plates by this method exhibit peculiarities of staining and structure which permit them to be definitely recognized as blood plates and to be clearly distinguished from all other histological elements, I have been able to show that the so-called granular material seen in sections of mixed thrombi in man consists exclusively of blood plates and their fragments without any admixture whatever of fragments of red blood corpuscles.

THE OCCURRENCE OF OCCULT HEMORRHAGES IN TYPHOID FEVER.*

BY WILDER TILESTON, M.D.

IN view of the recent advances in the detection of small traces of blood in the feces, it has seemed worth while to examine the stools in typhoid

¹ BOSTON MEDICAL AND SURGICAL JOURNAL, June 7, 1906.

² Journ. Med. Research, vii, 138, January, 1902.

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