

inside of his thighs, and I then became aware that air was passing freely through the opening of the "false passage" and escaping into the tissues of the perineum. There was no doubt but that the false passage was very extensive. No ill results ensued, but it is easily conceivable that damage of a grave description can be inflicted by unfiltered air passing over an inflamed surface and opening up extensive cellular planes in the thighs, perineum and pelvis.

Within the past year, while opening up infected follicles in the anterior urethra, I have observed two cases in which localized emphysema in the cellular tissue of the pendulous urethra occurred as a result of the air-inflation used during the operation. In neither of these cases was the local condition marked, nor were there any generalized symptoms. In both cases the emphysematous condition gradually disappeared within a few days without giving rise to any untoward symptoms.

In the following case, which forms the basis for this report, the emphysematous condition was so extensive, and the immediate symptoms so alarming in character, that a fatal issue seemed unavoidable. The possibility of similar complications arising in other cases of a like character has led me to the belief that extreme caution should be used in all intra-urethral or intravesical operations performed under air-inflation.

F. H. B., Douglas, Arizona, aged 35, married, family history negative, gave a history of intermittent urethritis for the previous fifteen years. The patient was first seen on Oct. 3, 1910.

Examination showed typical chronic urethritis of the antero-posterior type. Urethroscopy disclosed diffuse infiltration, a few infected urethral follicles tending to become cystic, and a band-like stricture on the floor of the urethra just anterior to the peno-scrotal junction.

After preliminary treatment, the air-inflation urethroscope was introduced October 12, and preparations were made for dividing the stricture through the urethroscope. The strictured area was cocaineized by the application of a 2 per cent. solution, and after a few minutes the urethra was inflated with air and the stricture divided. An emphysematous condition of the cellular tissue in the neighborhood of the stricture was noted and almost immediately the patient complained of pains in the epigastrium and began to cough. He became rapidly cyanotic and the radial pulse became imperceptible. Auscultation over the cardiac area revealed the "whirr" of what was apparently considerable quantities of air passing through the heart. The heart-sound rapidly became feeble and then could not be detected. Respiration quickly ceased, not suddenly but progressively, as in the dying. The pupils were fully dilated and the eyes were fixed; in fact, the whole appearance of the patient was that of a cadaver.

Artificial respiration was employed and whisky administered hypodermatically. Within a short time feeble signs of returning life were noticed and the patient gradually recovered consciousness, though some air could still be heard whirring through the heart. The patient still complained of a feeling of oppression in the epigastrium and this feeling was noticeable in a gradually diminishing degree for a period of about one week.

The local emphysema was not marked and seemed to involve only the cellular tissue of the pendulous urethra. There was no emphysema of the scrotal tissues.

On the following day the patient complained of tenderness in the hypogastrum, especially marked on the left side. Examination revealed a fairly extensive emphysema of the abdominal wall, which slowly disappeared in about one week. No other symptoms of an untoward nature were noted.

There can be no question but that the causative factor of the serious symptoms in this case was air embolus. It is, however, astonishing what an amount of air was forced into the circulation without a fatal issue. This case cannot be regarded as merely an "accident" occurring during operative urethroscopy under air-inflation,

though like symptoms have never been noted in my experience in similar operative work, which covers several hundred cases. Like "accidents" appeal to me as being ever-present possibilities in such work, and I would urge extreme caution in the employment of air-inflation urethroscopy for operative purposes.

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THE CAUSE AND TREATMENT OF DEFECTIVE MUTATION OF THE VOICE

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The change of the voice at puberty sometimes goes on improperly, and the young man acquires a high, falsetto tone instead of the regular tenor or base. The condition is very troublesome to the business man, and is particularly obnoxious in public speakers, clergymen, lawyers and military officers.

An examination of the larynx in such a condition shows the vocal cords to be excessively shiny and white, and apparently very tightly stretched. An external examination shows that in speaking or singing the larynx is pulled high up under the tongue and often rather forward toward the chin. The condition is evidently due to overcontraction of both the intrinsic and the extrinsic muscles of the larynx, whereby the vocal cords are stretched too tightly. The overcontraction is found only during singing and speaking. It is a purely nervous habit.

The treatment begins by teaching the person to sing on very low tones. At first the tones will be harsh and rattling, but they will gradually become natural. The pitch of the song is gradually raised until the patient sings over the normal range of voice. Another exercise consists of chanting sentences on a single low tone, which is gradually raised in pitch in successive exercises. A third exercise consists in singing the first word or two of a sentence on a low tone and finishing it by speaking. In a fourth line of work, exercises in singing and speaking are used while the patient presses the larynx down and backward by putting his fingers on the hyoid bone and on the notch at the front of the thyroid cartilage.

With such direct methods of treatment it is possible to eliminate the defect entirely, usually in a very short time. The cure is often completed in one or two weeks.

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Therapeutics

DRUGS USED TO ACT ON THE CIRCULATION

No part of the body is more maltreated medicinally than the heart. Some of such mistaken treatment is due to carelessness, some to lack of proper diagnosis and understanding of the pathology of the condition, while at other times it is due to an entire misunderstanding or ignorance of the action of the drugs used. At still other times there may be the most careful discrimination and the best possible judgment combined with a thorough understanding of the condition of the heart and circulation of a given patient, and still a drug will be used that does harm instead of good, or used in too large amount, or in insufficient amount. In other words, with all the knowledge we can bring to bear, it is not always possible to decide exactly what a heart and cir-