Some Practical Points on Sana= torium Treatment of pul= monary Tuberculosis.*

By J. EDWARD STUBBERT, M.D.. New York,

Professor of Pulmonary Discases, New York Post-Graduate Medical School; Member of American Climatological Association, dr. (Cutinued from page 322.)

Light .--- During the past few months the attention of the profession has been very strongly attracted towards the good results possible to obtain in the treatment of pulmonary tuberculosis by different light rays. We know how efficacious are the ordinary rays of the sun towards destroying the virility of the tubercle bacillus, and that six or seven hours' exposure will render inocuous the most virulent sputum. Beneficial results of light in living and sleeping rooms are too well known to be mentioned here. It is generally conceded that patients living in sunless rooms will never-no natter how favourable their other symptoms-recover from tuberculosis. I have seen a number of sad instances illustrating this fact. The beneficial action of the sun rays, when applied to the bared chest, has also been proven beyond cavil.

Dr. Richards, of this college, has treated a few cases of laryngeal tuberculosis with encouraging results, by reflecting the sun rays directly into a larvnx.

Finsen Light.---Experiments are being made by various observers with the action of the so-called Finsen light, and many good results are claimed by some, but they have not as yet been proven. The effect of arc-light rays, when thrown, for fifteen or twenty minutes, directly upon the chest of cases of empyema or of fætid bronchorrhæa, is, to say the least, remarkable. After its use the number of pus corpuscles decreases very markedly, and, as the septic condition disappears, the general nutrition of the patient improves. There seems to be some reason to believe that patients suffering from incipient pulmonary tuberculosis, whom I have treated with the arc-light for fifteen or twenty minutes daily, have made more rapid improvement than those treated by other methods.

Superficial tuberculosis has been cured by the Finsen rays, but not as rapidly or as surely as when exposed to the X-rays; and, arguing from analogy, it would appear that the beneficial results obtained by the arc or Finsen light rays, in cases of empyema or any form of internal tuberculosis, should be much more decided, provided we can safely allow the Xrays to penetrate through healthy to diseased tissues without interfering with the nutrition of the former. Thus far, we know that when the X rays reach a pyogenic membrane, the discharge very quickly changes to a sterile one. This has * Read before the New York Post-Graduate Clinical Society.

. 5

been demonstrated in my hands in the treatment of lupus of the face and carcinoma of the fundus of the uterus. In the former, after two applications, the discharge was greatly decreased, and in the latter case the discharge disappeared entirely.

Whenever possible, pulmonary cavities, either of tuberculous origin or simple abscesses, should be The tube exposed to the action of the X-rays. should be placed about eight inches from the surface of the body, with a platinum plate so arranged as to throw the rays directly upon the region of cavitation. These exposures should be made daily for intervals varying from ten to twenty minutes. The only possible danger attached to this method of treatment is the burning of the skin. If the tube is kept, as I have said, about eight inches distant, and careful inspection of the skin is made daily, this danger will amount to very little. On the first appearance of drying or cracking of the skin, the treatment should be discontinued for a few days. It may even be well to alternate the exposures, giving one in front one day and behind the next, so that a given point is exposed only once in two days. Vaseline can be rubbed over the parts at night, or, in fact, directly after the exposures if much irritation occurs.

The results that we should look for in this treatment are : First, decrease in expectoration ; second, disappearance of the various pus cocci; and, finally, disappearance of the tubercle bacilli. Decrease in cough would, of course, be a necessary accompaniment.

The same method of X-ray treatment can be applied to empyema cavities. Possibly, the X-rays may have an inhibiting, if not a resolvent, effect upon infiltrations and consolidations with cavities.

Now comes another method of treatment, and that is outdoor life. High elevation does not enjoy the reputation it once did in the minds of the profession in the treatment of tuberculosis. Pure air and plenty of it is now known to be more important than high elevation. It would be well if every tuberculous patient could be persuaded not only to live out of doors during the day, but to sleep out at night, excepting in stormy weather. When we look around the hospital wards in large cities and see the unfortunate results and unhappy conditions surrounding tuberculous patients, we can but wonder if the whole progress would not be changed for the better, at least in a large majority, were they allowed to live on the roof of the hospital day and night. How often do we hear of tuberculous subjects recovering entirely by spending their days on open delivery waggons, or living a wild tent life in the wilderness? It is not elevation or distant climes that accomplishes good results in these instances, but simply pure air, and we should remember this and urge it even more strongly among our city patients. Fear of free ventilation and



