

that the dark half of the tube is towards the patient, the effect is the same.

By standing by the patient on the side of the wires conducting the current from the coil to the tube, and then placing the tip of the fingers on the skin of the patient, and gliding the fingers to and fro underneath the Crookes's tube, the operator will then find that his sense of touch is completely perverted, the sensation being very much like that felt on the stroking of a purring cat; it is peculiar, and slightly weird the first time it is felt; the same sensation is felt by standing on the opposite side, but not so marked. In some people it can be felt from head to foot, but is most intense directly under the tube. Is there any reason why we should exclude this factor as a cause in the dermatitis, or the bald patch following exposure to the Crookes's tube? Perhaps less than including the *x* rays.

Again, there is not the slightest reason why a dermatitis should not appear at the exit as well as at the entrance of *x* rays through the skin (in those who are susceptible), in the hand, for example; but, so far, the lesions are confined to the side next to the Crookes's tube. It is chiefly on account of the above facts in connection with the working of the Crookes's tube that I hazard a doubt as to the connection of the Roentgen rays and the dermatitis or other after-exposure-to-Crookes's-tube lesions.

We want more definite knowledge with regard to the properties of Crookes's "radiant matter" outside the tube, before we pass the verdict of "guilty" upon the suspicious connection of the Roentgen rays and the dermatitis, and until that is forthcoming it seems to me to be a case of "not proven."

[Since writing the above on January 4th, I have read of a case where the dermatitis appeared also on the opposite side of the trunk; but as I am away from books, etc., I am unable to find out particulars as to what the patient was resting on, or whether braces with metal were worn during the exposure to the Crookes's tube.]

THE TRANSPARENCY OF BONES TO X RAYS IN CASES OF TUBERCULOUS DISEASE.

By T. E. ESPIN, M.A.

In the middle of December, 1896, a youth of 16 was brought to me with a locked wrist. A year previously he had run his arm against a wall, and apparently sprained it. This came right, but about four months previous to his coming to me trouble set in, and gradually increased till the use of the wrist was lost. Placing the wrist before the fluorescent screen the bones of the carpus were ill-defined, and the ulna and radius, metacarpal bones, and phalanges abnormally transparent. When the two wrists were placed side by side the difference in transparency was very remarkable. Not only are the bones of the carpus diseased, but the lack of contrast due to the transparency of all the bones is remarkable. The case is at present under treatment at the Newcastle Infirmary, and is undoubtedly tuberculous. The point was an interesting one, and I anxiously waited for another case to settle the question as to whether not only the bones attacked by disease were transparent, but the whole of the bones in the immediate neighbourhood.

Last week a young man came to me with a tuberculous knee. He had part of the radius of the left arm taken out a year ago, and had had a tuberculous abscess as well. He was thoroughly examined, and all the bones of both arms and legs were found to be abnormally transparent. There seems, therefore, good ground for believing that in cases of tuberculous disease of the bones there is an abnormal transparency not only in the part affected but in all the bones of the neighbourhood.

CASE III is of interest also, in showing that such a fracture may be overlooked. Mrs. McK., aged 45, could give no history of any injury. A fortnight previous to my seeing her she found her right wrist swollen and painful in the morning. Rubbing with a liniment was prescribed. I suspected a fracture, but could make out nothing except thickening with the screen. A skiagraph was taken, and showed a fracture similar to Case I, but with the parts in perfect apposition. The treatment adopted in each case was the application of

short anterior and long posterior splints and examination, after setting, with the screen, when any malposition could be detected and, if necessary, rectified.

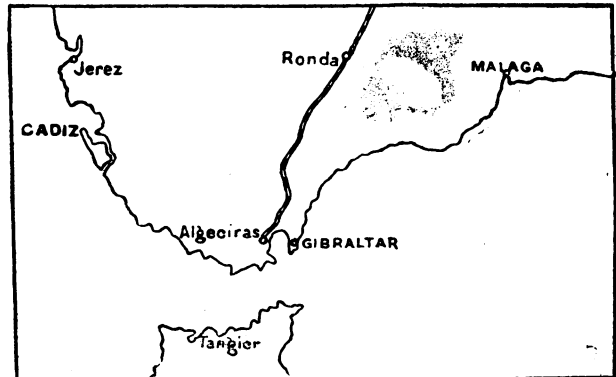
NOTES ON HEALTH RESORTS.

RONDA, IN ANDALUCIA.

By WILLIAM TURNER, M.A., M.D.,

Surgeon to the Colonial Hospital, Gibraltar; Honorary Secretary to the Gibraltar Branch of the British Medical Association.

UNTIL recently little has been known of the locality and consequently little has been written regarding the climatology of the southern spur of the province of Andalusia, which has now been opened up to the tourist and the health seeker. Most travelled Englishmen are acquainted with the ancient fortress of Gibraltar, and many have been pleasurably struck, on escaping from the discomforts of an English winter, with the wealth of sunshine and the mildness and equability of climate of this western end of the Mediterranean. Comparatively few, however, have visited and explored the neighbouring Spanish province, for the simple reason that until the year 1892 this could only be accomplished on horseback, and involved much roughing and expenditure of time. These impediments have now in great measure been removed, thanks to the enterprise of an English company, who have opened a line of railway (the Ferrocarril Algeciras-Bobadilla) running from near Gibraltar through some of the wildest and most picturesque mountain scenery in Europe, to connect with the main trunk of the Andalusian Railway, going northward from Malaga to Madrid. At a point on this line, eighty miles distant from Gibraltar, is the little town of Ronda, situated high in the mountains, 2,600 feet above the sea level, and it is to this spot that attention is chiefly directed in these remarks.



The number of tourists who arrive in Gibraltar during the winter and spring months is very large indeed, and rapidly increasing, but finding the accommodation on the Rock so limited, they are compelled to move on to other quarters—to Tangier, Malaga, and Granada—in order to obtain the requisite hotel accommodation. Although the number and quality of the Gibraltar hotels and boarding houses have of recent years been greatly increased, it seems useless to hope that they can ever supply the demand of foreign visitors. Space for building can hardly be got, and no encouragement can be given by the authorities to further its development as a health resort, as this would obviously be incompatible with its primary function as a fortress and important naval station.

The inhabitants of Ronda are alive to these facts, and the municipality is exerting itself to provide accommodation there which will meet the wants of English visitors. Sanitary improvements are receiving careful consideration and attention. A new and pure water supply is being introduced from distant hills, and will be completed within the next few months. The roads in the neighbourhood are being placed in a condition of better repair than hitherto; and the railway company have acquired an excellent site on the outskirts of the town, where it is intended to erect a large hotel, to be placed under efficient English management, and where invalids may expect to find the comforts of an English home:

Ronda is reached in four hours from Gibraltar. Passengers are conveyed from Gibraltar to the railway terminus at Algeciras in steamers of the company running in connection with the trains, the trip across the bay occupying twenty-five minutes. At present only four trains for passengers are run daily—two up and two down the line. The country traversed is at first flat agricultural land, skirting the bay of Gibraltar. The route is continued through a large tract of cork forest owned by the Duke of Medina-Celi until the watercourse of the Guadiaro River is reached—a rapid mountain stream, the bed of which is followed pretty closely to the end of the journey. The ascent in many parts is very steep, and the scenery brought into view is rugged and mountainous in the extreme. Several old Moorish and Roman strongholds, built in characteristic fashion on the top or on the slopes of the hills are passed on the route until the valley of Ronda opens out, with its far-famed gardens, rich in every variety of fruit trees—orange and lemon, olive and fig, cherry and apple, pomegranate and loquat, peach and apricot, walnut and almond, while much of the land is cultivated in barley and vine, and every kind of green vegetable is there produced. The whole valley is studded with white prosperous-looking farms, each nestling in its little clump of orange and cypress trees.

The town of Ronda lies on a high plateau of porous conglomerate and limestone rock. Surrounding it on the east, south, and west is an extensive range of rocky mountains—the Sierra Rondeña, and even on the north side the ground rises gradually for some considerable distance, so that almost complete protection against wind storms is afforded; and the air, whilst it is pure, dry, and stimulating, is mostly calm and mild. Snow lies on the tops of the distant hills at intervals for two or three months in winter, and even in the town itself snow occasionally falls, but never remains throughout the day.

Unquestionably Ronda is one of the most picturesque cities in Europe. The old Moorish town is divided from the new quarter by the Tajo, a stupendous rent in the mountain some 200 feet wide and about 350 feet deep. The old town is only accessible from the south-east by a narrow and difficult ascent guarded by a fort. It was the last stronghold of the Moors in Spain, and was taken by stratagem by Ferdinand and Isabella in the year 1485. The town hangs on a rock girt by the river Guadalvin, which lower down becomes the Guadiaro. The view from the Alameda, or public garden, over the mountain panorama to the south is very fine, the gardens themselves being situated on the verge of the cliff, whence there is an almost sheer descent of nearly 1,000 feet into the valley below. The site for the projected hotel lies in close proximity to the Alameda, and commands the same view of mountain and valley. The town is lit by electricity generated by the river as it flows in a magnificent cascade through the Tajo. The same water power is utilised for a long series of flour mills, of which a most interesting view is to be had from the bridge which connects the old town with the new.

The population of Ronda is about 28,000 of a hardy spirited type, proverbially long lived. The chief industries are agriculture, wine and fruit-growing, flour-making, and the manufacture of olive oil and wine, which latter is of excellent quality and might almost compete with the lighter vintage of Jerez and Sanlúcar. Ronda is also the chief market town of the province; its horse fair is the most important in the district, and its bull ring is one of the oldest and best in the south of Spain. Here the picturesque costumes of the Andaluz can be seen in their perfection. The streets are open but not well paved, the habitations are mostly low cottages built after the usual Spanish type, with the characteristic patios filled with shrubbery and flowers in the centre. They are kept scrupulously clean and neat by the frequent and liberal use of whitewash. Food supply is abundant in the town and neighbourhood, flour is one of the principal articles of commerce, game is fairly plentiful, and fish in great variety is brought from Estepona on the Mediterranean coast and from villages on the Straits of Gibraltar.

The hotels as at present constituted are not of the highest class, and cannot be said to supply all the luxuries which English invalids in a feeble state of health are accustomed to require, yet the ordinary comforts of living are obtainable in

such houses as the Hotel Gibraltar, Hotel America, and Hotel Rondeña, and every effort is being made to improve these so as to render them attractive to visitors.

The roads are sufficiently good to admit of long carriage and bicycle rides into the country, and horses may be hired for excursions into the hills or to explore the villages in the vicinity. A golf course and tennis courts will be instituted in connection with the new hotel, and other pastimes will doubtless follow. Some shooting and fishing might likewise be had.

No systematic observations on the meteorology of Ronda have as yet been made. This much can be said: the rainfall is low and the number of rainy days is small even in winter; little or no rain falls in summer. It is a curious fact that by far the larger part of the rain in this district falls during the night, and the soil is so porous that little trace of wet is to be found by the time the sun has risen clear of the hills. It follows that a very large number of the days are cloudless and sunny, so that invalids can spend much of their time out of doors, even though the air be somewhat low in temperature. The peculiarly invigorating quality of the atmosphere is constantly remarked upon by visitors from the sea level at Gibraltar and Malaga, and rapidly tells in the improvement of appetite and the capacity for prolonged exertion.

The climate of Ronda may be regarded as occupying a middle position, not only geographically but physically, between the extreme dry cold of Davos and the moist warmth of Madeira, possessing many of the advantages and escaping some of the disadvantages of both. The dry crisp air, free from microbial taint, the high altitude and stimulating properties of the former are in great measure imitated, whilst the effect of exposure to extremely low degrees of temperature is avoided. The relaxing properties due to excessive moisture and a somewhat excessive heat of the latter are entirely absent. Compared also with the climatic conditions of the Riviera, the temperatures are not very dissimilar, whilst the peculiarly enervating influence which is so frequently complained of by those who are accustomed to winter on the French coast is never experienced at Ronda. There are, no doubt, certain classes of lung affections which derive much benefit from residence on the Mediterranean littoral, and should such cases fail to improve in Ronda they could be quickly and comfortably moved to quarters in Tangier or Malaga, both of which stand high in repute for the mildness and equability of their climate and their suitability for most forms of pulmonary disease. Tangier lies within three hours' sea journey from Gibraltar, and Malaga can be reached in four hours by rail from Ronda. Granada, too, which is in many respects similarly situated to Ronda, and possesses many local attractions, is separated from it by only five hours' run by rail.

The routes from London are, first, the overland journey from Charing Cross *via* Dover, Paris, Madrid, Cordova, and Bobadilla, but this is a somewhat trying and more expensive mode of approach, and occupies sixty-five hours of almost continuous travelling, unless the journey is broken for rest. Through tickets, including breaks of journey at all important points, can be had at Cook's offices in London. The alternative route is by sea from London, *via* Plymouth to Gibraltar, through the much maligned Bay of Biscay. P. and O. steamers run weekly, the Orient Line having fortnightly boats, and the time occupied is about three days from Plymouth. The comfort of these steamers cannot anywhere be surpassed, and, provided there is no special indication against sea travelling, most people would do well to select this route.

These notes, in response to the suggestion of eminent English medical men who have lately visited Ronda, are intended more as a preliminary notice of what may be regarded as a new and promising health resort, calling attention to its drawbacks as well as laying claim to its advantages, and do not profess in any way to supply the data for instituting a comparison with other foreign health stations. Many English invalids object (on the ground of distance from their home) to Cairo, the Canary Islands, Madeira, the Cape, and all the fashionable watering places of the day which are not within easy reach of England, preferring to seek their cure in the sanatoria of the British Isles, and it is for them especially that Spain seems to offer a sort of compromise.

The Clothworkers' Company have granted £500 to the special fund of £100,000 now being raised on behalf of Charing Cross Hospital.