ing the temperature. If, in spite of the hæmorrhage, the temperature again rise, we can give quinine and sponge the patient with cold water. In peritonitis, rest is still more more imperative, and we must have recourse to the same remedies, with the exception of the styptics. Very commonly, however, both hæmorrhage and peritonitis themselves induce great depression of the temperature.

[To be concluded.]

ABSTRACT REPORT OF LECTURES ON THE COMPARATIVE ANATOMY OF MAN. *Delivered at the Royal College of Surgeons of England.*

By W. H. FLOWER, LL.D., F.R.S.,

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LECTURE VI.—THE RACES OF AFRICA (*continued*).

VARIOUS statements have been made by travellers regarding the size and shape of the hands and feet of the Negro; but none of them are sufficiently accurate to be of much use to the anthropologist. The relative length of the toes is a characteristic which might mark a difference between Europeans and Negroes. The great toe is usually the longest toe in the foot of an European, and the others recede progressively; whereas in the Negro the second toe is, as far as the material at our disposal shows, generally slightly the longest. This is an approach to the form of foot in the higher apes, as in them the second toe is decidedly longer than the great toe. The foot, therefore, in which the great toe is longer than the other, is of a higher type. It would be well, however, if we could get some further information on this point, as we are not in a position to state with accuracy the relative lengths of the toes in the Negro races.

The difference between the pelvis of the African Negro and that of the European has been pointed out by Vrolik and others. It consists mainly in the increase of the antero-posterior diameter, as compared with the transverse, expressed by the pelvic index or ratio between these diameters, the latter being taken as 100. In the European male, the average index is 80; in Negroes, according to various observers, from 90 to 100. As in the proportions of the limbs, many of the Mongoloid races conform, in the character of the pelvis, rather with the Negro than with the European.

In the cranial characters, the distinctions between the Negro and white races are strongly marked. The skull of the Negro is thicker and heavier generally than that of the European; and the average capacity of the cerebral cavity is undoubtedly smaller in the former, even in individuals of approximately the same height. It is, however, considerably higher than in the Australians. The difference between the average capacity of English and Negro crania in the College museum is 123 cubic centimetres; between the latter and the Australians, 90 cubic centimetres. Of fifteen male English skulls (mostly of the lowest and least intellectual grade of society) in the College museum, the cranial capacity is 1,511 cubic centimetres; of thirty-two male Australians, it is 1,298 cubic centimetres; and of twenty-six Negroes, it is 1,388 cubic centimetres. Broca's totally independent measurements of skulls at Paris give a difference in the former case (Parisians being substituted for English) of 128 cubic centimetres, and in the latter of 83 cubic centimetres; so that the results are substantially identical. The general form of the cranium is expressed by the cephalic or latitudinal index, or relation of the breadth to the length, the latter taken as 100. The average index of forty-two Negroes of various tribes in the College museum is 73.6. Of these, more than half are between 70 and 75, or dolichocephalic; less than half are above 75, or mesocephalic; but very few are either below 70 or above 80. The average index of eighty-five Negroes from the West Coast of Africa, measured by Broca, is 73.4; and of fifty-three from East Africa, measured by Lederle, 73.9. These remarkable agreements with our own measurements show that between 73 and 74 may be fairly taken as a general average of the cephalic index of the African Negro; and that he belongs, therefore, to the moderately dolichocephalic races. The height, measured from the basion to the bregma, is almost identical with the breadth of the average of the forty-two College specimens, giving 73.5. The Negro skull, in these proportions, differs greatly from that of the Fiji

islanders described in the first lecture. The skull is rounded on the top, and not sloping off laterally like the roof of a house, as in the Australians. The sutures are simple, but more complex than in the Australians, and the temporal fossæ are deep. The differences in the position of the foramen magnum, in the angle formed by its plane with the horizontal of the skull, and in the various facial angles which have been pointed out as characterising the Negro skull as compared with that of the European, can only be explained by means of diagrams. The facial characters are generally eminently characteristic. The forehead, though narrow, is not retreating. The glabella and supraorbital ridges are sometimes well developed; but more usually this region is smooth and flat. The orbits have a moderate index—85.5 (Broca), or 86.3, according to measurements of the College collection. The nose is distinctively platy-rhine, the average index being 55 or 56. The nasal bones are small and flat; their external surfaces directed forwards, the two meeting in front at a very open angle, instead of a narrow one as in Europeans. The lower margin of the nasal aperture is usually rounded off, instead of sharp and strongly defined. Equally characteristic is the prognathism, which is very rarely absent. The measurement from the basion to the middle of the alveolar border is greater than that from the basion to the naso-frontal suture (the cranio-facial axis); whereas in Europeans the reverse is the case.

The teeth are regular, well developed, and generally free from caries. The third molars, or wisdom-teeth, appear to be always in their places before the closure of the basilar suture, whereas among civilised races they are often much later in coming into place. The size of the teeth varies in different races; but hitherto no accurate measurements have been made to express this difference. The length of the molar series in a straight line between the anterior edge of the first premolar and the posterior edge of the third molar may be conveniently used to indicate the size of the teeth, and called *d*. This may be compared with the length of the cranio-facial axis or basi-nasal length $\frac{d \times 100}{BN}$. This will give, at all events, a fair approximation to the relative size of the teeth, compared with the skull, as the length BN is one of the least liable to variation of any in the cranium. Unfortunately for this investigation, in a large proportion of the crania in museums, the teeth are wholly or partially lost, and a larger number of specimens must be measured than are at present available. The following indices (which must be regarded as provisional) are, however, of considerable interest. In the first place, it must be observed that the teeth of women, though smaller absolutely than those of men, are relatively larger to the cranio-facial axis. For instance, in Europeans, the dental index of males is 40.5; of females, 42.0. In Australians, the disproportion is greater still, being 45.7 for the males and 48.4 for the females examined. In the following table, males only will be included: Europeans, 40.5; ancient Egyptians, 40.8; Hindoos, 41.2; American Indians, 42.5; Chinese, 43.8; African Negroes, 43.9; Andamanese, 44.2; Fijians, 45.4; Australians, 45.7. It will thus be seen that, in the size of the molar teeth, the Negroes hold an intermediate position between Europeans and Australians, but approaching nearer the latter. The actual average length of the molar series in European males is 40.8 millimetres; in Africans, 45.4 millimetres; in Australians, 46.7. The anthropoid apes give a higher index than that of any of the races of man.

ALCOHOL IN FEVER.*

By H. MACNAUGHTON JONES, M.D.,

Professor in the Queen's University, Ireland, and Physician to the Fever Hospital, Cork.

I INTEND these few remarks to be essentially practical, giving rather the results of my individual bedside experience than broaching any original views or theories with regard to this important question. Independently of private cases, I have treated in the Cork Fever Hospital, from January 1873 to June 30th, 1879, 899 cases of fever, meaning by fever, typhus, typhoid, and simple continued fever. I commence at this date, for it was in this year that I first determined to watch carefully the effects of digitalis in fever, and learned to abandon the too generous use of alcohol; nay more, to administer it only in a certain percentage of cases, in which the indications for its employment are clear, and when the responsibilities of withholding stimulants would be infinitely greater than that of administering them. I have since been most careful in ordering brandy or wine of any kind in fever. My views of the value of alcohol I shall, having read these tables, briefly summarise.

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

In the year 1875, I published, in the *Dublin Monthly Journal of Medical Science*, a table of 310 cases of fever; of these, 220 got no stimulants, 58 had claret alone, 33 had brandy. Of this number, 110 were typhus patients, of whom 26 had stimulants. The mortality in the typhus cases was 8 per cent.; in all other cases, $3\frac{1}{2}$ per cent. The brandy in all the fatal cases was commenced from the first to the fifth day. In that period, I had two deaths from typhoid fever; both patients had stimulants from an early date in the attack. I have divided the patients treated since the publication of this table under two heads; Table A: Total patients treated, with percentage of deaths; Table B: Total patients treated since January 1877. I had not an accurate record of the patients who had stimulants from February 1875 to January 1877, as the hospital wine-book was unfortunately mislaid. But the average number of patients who received stimulants was about the same as from January 1873 to February 1875, during which time 30 per cent. of all the cases had stimulants at some period of the fever. From January 1877 to June 30th, 1879, 36.17 per cent. have had stimulants. In typhus fever, stimulants were given during the first period to 23.6 per cent. of the cases, and during the latter, to 41.37 per cent. In typhoid fever, of 107 cases, 22 had brandy and wine, 27 claret alone.

Total percentage of typhoid patients taking brandy at some period of the fever	20.56
Total percentage of ditto taking claret at some period of the fever	25.23
Deaths of the former	36.36 per cent.
Deaths of the latter	7.40 "

Of 117 cases of simple continued fever, 5.12 per cent. were given brandy, and 5.12 per cent. claret. There were no deaths. In all these cases, temperature-charts of the disease have been kept. Sphygmographic tracings of several were taken during the illness.

TABLE A.—Patients Treated since February 1875.

Total number treated	589
Total number of deaths	47
Total number of typhus patients treated	239
Total number of typhus deaths	35
Total number of typhoid treated	147
Total number of typhoid deaths	12
Total number of simple fever treated	203
Total percentage of deaths (deducting nine, registered hopeless on admission)	6.45
Percentage of typhus deaths (deducting nine hopeless)	10.86
Percentage of typhoid deaths	8.16

Of the typhus patients who died, 9 were hopeless on admission, 7 were ill more than ten days, 1 was complicated with encephalitis, 1 was subject to epileptic fits, 1 was a confirmed drunkard, having taken according to his friends statement, "nothing but whiskey for ten days previous to admission."

Of the typhoid patients who died, 3 were ill more than ten days on admission, one was complicated with pneumonia, and one was a drunkard previously.

TABLE B.—Patients Treated since January 1877.

Total number treated	340
Total number of deaths	25
Total number of typhus treated	116
Total number of typhus deaths	14
Total number of typhoid treated	107
Total number of typhoid deaths	11
Total number of simple fever treated	117
Total percentage of deaths	6.17
Percentage of typhus deaths	8.62
Percentage of typhoid deaths	10.28
Total number who got brandy	58
Typhus	30; of whom 11 died
Typhoid	22 " 8 "
Simple fever	6 " 0 "
Total number who got claret (no brandy)	65
Typhus	18; of whom 0 died
Typhoid	27 " 2 "
Simple fever	6 " 0 "
Total number treated without any stimulant	217

Of those typhus patients who died, 4 were registered as hopeless on admission, and 3 were ill over ten days.

Of the typhoid patients who died, 2 were ill over ten days, 1 was a drunkard previously, and 1 was complicated with pneumonia.

TABLE C.

Total patients treated since January 1873	899
Total typhus fever patients since January 1873	349

Of these, records of 226 show that 74 had stimulants of any kind, either during the fever or convalescence (several in this latter period). In typhus fever, 32.74 took stimulants, with a mortality of 7.16 per cent.

I may now sum up my conviction from bedside experience of the value of alcohol in fever. It is a most valuable therapeutic agent in both typhus and typhoid fever. A large percentage of cases not alone do not require it, but its administration is apt to lead to complications. It is impossible to lay down rules as to the stage of the fever in which

it may be indicated, as this indication depends rather on the type of the fever than on its stage. But the time to watch for its administration in ordinary cases is from the eighth to the twelfth day. Early administration of alcohol in fever is injudicious. I have little faith in the early employment of stimulants preventing an adynamic condition, and I have rarely seen them have a good effect in the early stages of the fever of habitual drinkers. I am inclined to think that it is a dangerous fallacy to regard them as essential in such cases. Of the two, I have more often seen hard drinkers recover without stimulants than with them. Alcohol, in my experience, has little effect on the temperature of fever.

I generally take as my tests the age of the patients, the condition of the heart, the pulse, tongue, and head symptoms. Young patients, as a rule, do well without stimulants. A feeble, irregularly acting heart, with weakened first sound; a compressible and rapid pulse, a tongue keeping fairly moist, the absence of violent head symptoms, encourage me in their continuance and use. I believe that we possess in alcohol a supporting food, in those typhoid states where assimilation is difficult, and I have many times seen lives saved in fever, sustained for days by brandy and milk alone, where everything else had been rejected.

The practices I conceive most to be deplored in the administration of alcohol, are (1) the indiscriminate employment in the earlier stages of fever; (2) the rash continuance and the increase of the quantity used, when the symptoms clearly show that it is acting injuriously.

I cite one case of typhoid fever, to illustrate the value of stimulants, judiciously administered at the proper time, with their effects carefully watched.

The patient, a girl, had been ill three weeks before admission. The following was the train of symptoms. Temperature range, with marked exacerbations, first week, 102° to 105°; second week, 100° to 105°. On admission, there were crepitation over both lungs, rusty sputa, rapid respiration, constant stools; severe epistaxis. She was deaf and delirious. She passed a large hæmorrhagic stool a few hours after admission, and passed in twenty-four hours four such stools; for days she had involuntary ones. A note was taken twice during the first week of her being "cold and listless; pulse hæmorrhagic". All through, the tongue kept moist and fairly clean. The motions were very frequent for some days. She had occasional attacks of hectic, followed by profuse diaphoresis and cold sweats. This girl was one of the worst cases of typhoid fever, if not the worst, I have ever seen recover. Her treatment during the period of hæmorrhage was almost entirely non-stimulant, consisting of milk, beef-essence (in small doses), fowl-broth; and as medicines, digitalis, ipecacuanha, and Dover's powder; quinine, opium, sulphuric acid lemonade, gallic acid; acetate of lead and opium enemata; the usual local applications to the abdomen, and tepid spongings every fourth hour to the trunk. On the seventh day after admission, the note entered was, "pulse duplex, dicrotous, feeble". She was given brandy and milk every fourth hour, and an ounce of claret every second hour. She was put on a mixture of muriated tincture of iron, tincture and infusion of digitalis, spirit of chloroform every third hour. This was changed subsequently for quinine and digitalis. She refused all stimulants on November 18th, and from this to January 4th, she took none. She had milk diet mainly. After stimulants were first given, the note entered was, "looks better; pulse improved; stronger".

HOW ARE WE TO DEAL, BY ISOLATION OR OTHERWISE, WITH CONVALESCENTS FROM ACUTE INFECTIVE DISEASES, SO AS TO LIMIT THE SPREAD OF THESE COMPLAINTS?*

By ARTHUR RANSOME, M.D., M.A., Manchester.

IN selecting this subject for special discussion, the committee, who have had the arrangement of this meeting of the Association, have probably desired to call attention to the present unsatisfactory position of the question, rather than to elicit any very novel remarks concerning it.

Our information respecting the limits of contagiousness of different diseases is, of a truth, of the most meagre description; and our practice in reference to this subject is based upon limited personal observation, or upon tradition handed down from seniors to juniors in the profession. And yet the practical importance of the subject is very great, and if it were to be measured by the number of times that medical men have to answer questions relating to it, the need for its settlement would soon be shown to be very urgent.

* Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.