

inflammation, the most potent cause of asthma, is also more common among the former, who are far more exposed to cold, vicissitudes of weather, damp, and the like, and have bronchitis more frequently. Salter maintains that this is the only reason of asthma predominating among men; and that asthma of nervous origin is, like hysteria, chorea, and other diseases of exalted nervous sensibility, more common among women.

As regards age, no period of life is free from attacks of asthma. It is quite as much a disease of childhood as old age. We find it coming on in a large number of cases in middle life, and in a much smaller one, above fifty. The bronchial attacks of childhood cause the percentage to be the highest during the period of their greatest prevalence.

THE MEDICAL VALUE OF ARTERIAL PRESSURE.

By EDWARD DE MORGAN, District Surgeon, Queenstown, Africa.

The following deductions were made by me some years ago when experimenting with the sphygmograph. As I have found their practical application in diseases of the chest so valuable, I feel myself no longer justified in withholding them from the criticism of the profession.

Let us assume that pressure be applied to both axillary and femoral arteries; then, roughly speaking, about half the blood in the systemic or greater circulation is withheld. The remainder returns to fill the left ventricle of the heart, which either contracts upon half its normal amount of blood or *delays* its contraction until sufficient blood has returned from the unobstructed vessels to distend it to its normal contracting volume. If the latter of these two alternatives were the case the pulse would be diminished in frequency and its fulness greatly increased. It may at once be ascertained, by pressure on a femoral artery, that there is no alteration in frequency, and the sphygmograph shows that there is no increased tension in the radial pulse when the femorals are compressed. Hence it follows that the left ventricle contracts upon half its normal quantity of blood, and that the right ventricle contracts upon half its normal amount of blood, and that, the area of the pulmonary or lesser circulation being undiminished, the pulmonary artery contains but half its normal amount of blood; and thus it follows that the blood speeds through it less rapidly, and pressure within its walls is greatly diminished.

I determined to apply this theory in three different sets of cases.

1. (a) Hæmoptysis in consumptive cases; (b) hæmorrhage from wound of lung.
2. On the supposition that damming back venous blood from the lungs would diminish the necessity of oxygenation; (a) spasmodic asthma; (b) emphysematous and cardiac dyspnoea.
3. As a direct *dry cupping* of the lung in inflammatory diseases.

Of Class 1 I have had but little experience. We have but little hæmoptysis in South Africa. In the case of a Kaffir with a bullet-wound of the left lung, pneumothorax and hæmothorax pre-

sent in a great degree, axillary pressure gave immediate relief to the dyspnoea.

Of Class 2 I have applied pressure in five cases and afforded immediate relief to dyspnoea in all. Miss S—— has spasmodic asthma every month. She came to my consulting-room in great distress. I applied my thumbs to both axillary arteries, and she expressed herself immediately relieved. Pressure was continued for about five minutes. Upon removing it the dyspnoea did not return for about ten minutes, when pressure was again applied, and she left with her breathing nearly natural, the dyspnoea this time not returning for some hours. Her friends by my directions compressed her arteries, each time affording her relief. She states that this was the severest, but shortest attack she has had, and that less bronchitis was left than usual.

W. S——, an old missionary, aged seventy-six, has been failing since I first saw him one year ago. Has chronic bronchitis, emphysema, and dilatation of the right ventricle, besides other complications. One evening in May last I was summoned to him in haste, as his friends feared he was dying. I found him sitting up in bed; orthopnoea extreme; face livid; hands plucking at the bedclothes; cough incessant. He had had every door and window thrown open, and permitted no one to stand at his bedside. He just managed to gasp out that "I was too late this time." I applied my fingers to his axillaries alone, and in less than two minutes he was thanking me in his old manner, and inquiring into the *modus operandi* of the means I had used. The pressure was removed after ten minutes, but the dyspnoea did not return. He began to cough up mucous more freely, and in a quarter of an hour fell asleep. On subsequent occasions, if pressure was removed too soon, he would start up and cry out that "It was coming back," but was again tranquil upon its reaplication.

The sequel of this case is interesting, as bearing upon this treatment. The following morning, whilst Mr. S—— was turning in bed, he fractured a rib on the left side. I was sent for, and found him in great agony, the crepitation being audible to those around on each laboured inspiration. Strapping and subcutaneous injection of morphia relieved him.

The following evening I was again sent for, this time to find him in a state of extreme cardiac apnoea; face deadly pale; pulse rapid and exceedingly compressible; respiration rapid; air entering freely into all parts of the lungs. Complained of a death-like feeling over præcordial region. Axillary pressure gave scarcely any relief. In fear and trembling, and feeling my way with small doses, I gave morphia, and this relieved the dyspnoea and procured sleep.

Subsequent experience in this patient's case, which ended fatally a few days after, convinced me that cardiac dyspnoea was not to be relieved in nearly the same degree as that of pulmonary origin, but in the latter relief was immediate and unailing.

I will not occupy space by enumerating other cases; suffice it to say that mine, although few, have all been most unequivocal. And although

I cannot imagine but that the principle and practice have been recognized before, yet, as I have never hitherto met a medical man to whom the effect of arterial stoppage upon the circulation has not been a novelty, I earnestly beg the profession to adapt it to treatment, and trust all may give the same relief to suffering that I have been enabled to do.

With respect to Class 3, where there is active inflammation of lung tissue, I cannot, from want of experience, speak with conviction. I think that gentle pressure of the femorals (it need not be complete) might be serviceable in the intractable catarrhs at the apex of the lung in phthisical people. I can speak from personal experience of the relief that pressure on one or both femorals gives to those irritating coughs that destroy the rest of those with consumptive disease. It might be well to remind experimenters that pneumonia predisposes to the formation of a pulmonary clot, and that it might be dangerous to slacken the pulmonary current in that disease.

Stoppage of epistaxis by elevating the arms may be due to the same cause by compressing the axillary arteries. This would act, I imagine, by facilitating the return of blood through the superior vena cava. If so, digital compression would be better. This is rendered probable by the arrest of hæmoptysis by tying up the arms of consumptives. My friend, Dr. Grabham, of Madeira, whose experience is large, told me that he often treated hæmoptysis in this way with success.

Least I should override my hobby, I will only suggest the probability of lowered temperature in lungs whose bloodstream is much diminished, and the possibility of inflammation resulting, as after great amputations.

SURGERY.

SCROFULOUS DISEASE OF THE ANKLE JOINT.

From a Clinical Lecture by Professor PANCOAST. Reported by FRANK WOODBURY, M.D.

This little girl has inherited disease, and illustrates the influence of a constitutional taint upon the physical development. The life-springs are poisoned at their source, the vital functions performed imperfectly and irregularly, nutrition vitiated, and the whole organism enfeebled. The little subject is thus rendered more susceptible to disease and less able to resist its ravages. Two years of age, her frame is emaciated, the skin is sallow and shows a tendency to eruption, and she has chronic conjunctivitis. She has not the light hair that frequently accompanies these symptoms, which, for convenience, are grouped under the general term of strumous; but this is the case in a large proportion of scrofulous subjects. In France, where scrofula abounds, there is comparatively little light hair; and the negro race, as we know, is quite subject to it. Experience has shown that of the two classes of strumous subjects the brunette is more liable to phthisis pulmonalis than is the blonde, who suffers more from bone and joint affections and diseases of the skin.

About four months ago the child's foot was bruised, and this injury has eventuated in chronic disease of the ankle joint. The inflammation