EXCISION OF THE SUPERIOR MAXILLARY BONE : WITH CLINICAL REMARKS.

By GEORGE BUCHANAN, A.M., M.D.,

Surgeon to the Royal Infirmary, Glasgow, and Professor of Anatomy in the Andersonian University, etc.

S. W., aged 48, was admitted to the Royal Infirmary, on March 3rd, 1868, with a tumour of the upper jaw. She was in her usual health till about fifteen months previously, when she began to be troubled with a "stuffing" of the right nostril. Eight months before admission, she lost the sense of smell, and at the same time she became aware of a fullness of the right cheek. Previously to this, she was troubled with swelling and pain of the gum near the right molar teeth, which was attributed to gum-boil, and for which she got some teeth extracted, without relief.

On admission, there was observed a very marked protrusion of the right superior maxillary bone. The swelling was nodular, and hard to the touch. The growth extended into the right nostril and pressed up the nasal bone. It also protruded into the mouth. It did not seem to invade the orbit; but a semi-elastic tumour was felt in the right temple behind the malar bone. For a few weeks before admission, there had been a foetid discharge from the right nostril. She was rather feeble, and had lost appetite lately. The nature of the operation having been explained to the patient, she eagerly accepted the chance of relief from the distress which she had latterly been suffering.

On March 7th, the operation was performed, as follows. The patient was placed deeply under the influence of chloroform. The upper lip was slit up to the septum of the nose, and separated on the right side from the nasal orifice. A perpendicular incision was made from the ala of the nose up to the inner angle of the orbit. A transverse incision was extended from that along the infra-orbital ridge to the malar bone. The whole cheek was then dissected from the bone and tumour, and held back. Strong cutting pliers were used to divide the zygomatic process of the malar bone, the nasal process of the maxillary bone, and the palate in the mesial line. Little force was necessary to dislodge the superior maxillary bone and the contained tumour, but, owing to the softness of the latter, it broke off, and a part was left adhering to the bottom of the wound. That was removed with polypus-forceps; the gouge was used to scrape away any remaining portions; and a red-hot iron was freely applied to the bones against which the mass seemed to have been resting. The only vessels which required attention were the coronary, which were secured by torsion. A strong solution of chloride of zinc was applied to the whole wound; experience having shown that this substance has a remarkable efficacy in controlling the foetor which wounds in the mouth produce. The edges of the incision were brought together with silver sutures.—10 P.M. She was wonderfully well. Pulse 118. She felt little pain. She had had some sleep, and had taken some milk and beef-tea.

March 8th.—She had some sleep. Pulse 100; better than before the operation.

March 10th.—She was going on well. Pulse 90. The wound in the face had healed by the first intention. She was ordered to wash out her mouth freely with solution of chlorate of potash.

March 11th.—The lint which was introduced to support the cheek was removed to-day. There was not much discharge from the interior of the mouth.

March 20th.—All the stitches were removed to-day. The patient said that she had recovered the sense of smell, also partly that of taste, a pleasure which she had not enjoyed since eight months before the operation. This morning she walked up to the theatre—two stairs—and was shown to the clinical class.

April 10th.—The patient left the hospital to-day in excellent spirits. Free from pain and uneasiness. No appearance of any recurrence of the disease.

CLINICAL REMARKS made after the operation on the 7th of March. (Abridged). Gentlemen,—The operation which I explained to you yesterday and which you have just seen performed, is so appalling to an onlooker, that I must begin by telling you that it is not usually fatal in its immediate results. Still it is sufficiently formidable to make it imperative on the surgeon to be well satisfied of its necessity before undertaking it. The question of possible malignancy in this case I discussed fully at the clinical lecture, and I gave you my reasons for doubting that and giving the patient the benefit of the doubt. If the origin of the tumour could be clearly traced to a growth from the spongy bones of the ethmoid, there would be strong reason for prognosticating an early return of the disease; but here the alveolus was so early implicated that it was impossible to affirm that the invasion of the nostril did not arise from an out-growth from the antrum. The large protrusion of the tu-

mour into the zygomatic fossa also pointed to the probability that the tumour sprung from the floor of the antrum. Guarding my prognosis by these doubts I did not see it my duty to refuse the patient the hope of permanent—as I could almost promise her the certainty of temporary—relief from her present sufferings. It is now my duty to tell you that the nature of the tumour and its connections, as discovered during the operation, leaves little hope that the cure will be permanent, but that at no distant date we may look for a reappearance of the tumour. But I wish, very distinctly, to guard you against taking this case as a ground for adopting an opinion held by many practical surgeons, that tumours of the superior maxillary bone are so frequently malignant as to make their removal altogether exceptional. I have heard this argument used, and I have a case in point which is both interesting and important at the present moment, which I shall relate in a few words. Five years ago, I had a case in the hospital presenting most of the features of to-day's patient. However, the alveolar origin of the tumour seemed to me more marked than in this. My senior colleague strenuously urged me not to attempt its removal, on the grounds I have just stated, but, being supported by the others, at the man's urgent request I undertook the operation, which was performed much in the same way that you have just seen. Here in this jar (jar shown) is the preparation of the upper jaw and contained tumour removed at that time—and here is the man himself (patient introduced to the theatre), in the enjoyment of excellent health and strength, with no trace of a return of the disease, with perfect power of mastication and speech, five years after the operation. Such a result is, to my mind, a sufficient answer to objections which might be urged in a similar case, and a valid ground for performing such a formidable operation as you have just witnessed.

P.S.—October 31st, 1868. This was prepared for publication in July, but I have not sent it to press till I could give a late report. Two months ago I saw the patient whose case is detailed first, and I found my prognostications after the operation too true. The disease has re-appeared in the right cheek. The operation served as a palliative for a considerable time, but the re-invasion of the tumour leaves nothing but a painful prospect.

THE PREVENTIVE TREATMENT OF SCARLET FEVER.

By PETER HOOD, M.D.

Dr. W. BUDD, in his very valuable contribution to the JOURNAL of the 9th January, 1869, "On the Prevention of Scarlet Fever," has confined his observations to the means to be used for limiting the extension of the scarlatinal poison, and thus putting a stop to the spread of the disease. The importance of carrying out Dr. Budd's suggestions cannot be overestimated; and both the medical profession and the general public are greatly indebted to him for the pains he has taken in recording so minutely the results of his experience.

There can be no doubt that the next point of importance to the knowledge of how scarlet fever should be treated, is the power we possess of stopping the spread of the disease. We have not yet learned the means by which the various zymotic diseases may be—like small-pox—rendered comparatively harmless by previous vaccination. It is, however, something to be able to assert that, when a disease like scarlet fever does show itself, we have gained the power of limiting the extension of it from one individual to another.

Dr. Budd, in confining his observations to the destruction of the scarlatinal germ as it is cast from the body of the patient, consequently does not allude to a matter of even superior importance—namely, the means by which we can limit the increase of those germs already existing in the blood of the person, upon which, according to the amount of them, the mildness or severity of the fever depends.

It is on this account that I venture to give an additional record of my experience of the internal treatment of scarlet fever; and I trust that it may, as it has in my hands, prove an useful supplement to Dr. Budd's important advice as to the external appliances to be employed for the prevention of the disease.

It is ten years since I wrote a book which I was bold enough to designate as *The Successful Treatment of Scarlet Fever*. The lapse of time has produced no instance otherwise than confirmatory of the value of the treatment therein recommended; and it is a source of great satisfaction to me to be able to say that, notwithstanding the apparent confidence displayed in the title of that book, I have not lost a patient with scarlet fever since it was published, nor during many years preceding its appearance, when I have attended the patient from the commencement of the illness. I have been consulted in cases that have

ended fatally, but then this has been when the time for medical aid had passed, and the treatment which I advocated had not been employed. Those of my medical brethren who have adopted my treatment assure me "that they never lose a case of scarlet fever now."

It must not be expected that malignant cases, which have been from the first neglected, and in which the disease has attained great height before medical aid has been sought—where the sufferers have been living in crowded, badly ventilated, and badly drained habitations—can always be successfully treated by any form of treatment. When patients in this condition are brought to the hospitals, or seen as out-patients of dispensaries, it is too frequently the case that the time for curing them has gone by. Generally, patients of this class, their vital powers never having been very great, owing to the want of a wholesome and nutritious diet and of pure air, are more readily and powerfully acted on by the scarlatinal poison than those who are differently situated, both locally and in circumstances; and such enfeebled persons succumb rapidly to its influence. The mortality of scarlet fever is greatest in those children who inherit a scrofulous taint.

It is well known that the majority of cases are of a mild type, and such cases are usually designated "scarlatina". I consider this an objectionable designation, both on public and on professional grounds. By the public, the word is used as a diminutive, and it is apt to lull them into a dangerous belief that, because it is only "scarlatina", it is comparatively devoid of danger to the patient and those in his immediate proximity. This belief existing, the medical attendant will have greater difficulty in making those in charge of the patient sensible of the necessity for a prolonged watchfulness and care until perfect desquamation has taken place, the time occupied being usually three weeks to a month, and he also finds that the regulations and restrictions of diet are neglected, and that the patient is allowed to mix with others during the most infectious period of the disorder.

I therefore think the more prudent course would be to call every case of scarlet fever, however slight it may be, by its English name, adding the adjectives mild or severe when requisite. I urge this course with more confidence, on account of the same description of treatment being applicable to both forms of the disease, differing only in degree.

To maintain the integrity of the blood as much as it is possible is one great object in the treatment of scarlet fever. In proportion as we can accomplish this, so will our success in the treatment of the disease be satisfactory or otherwise. The rapidity with which life in some cases is cut short, from the reception into the system of the scarlatinal poison, shows the activity and virulence of its effects in some peculiar constitutions. That death in these cases is owing to the suddenness with which the entire mass of the blood is saturated with the poisonous germs, as in the analogous condition of uræmic poisoning, does not admit of a doubt.

It is, however, fortunate for mankind that such cases are rare, although it is far from uncommon to witness extreme prostration of some vital organ, the brain more especially, at the commencement of the disorder. When this is the case, convulsions are usually an attendant symptom. I have never known convulsions to occur unless the most common premonitory symptom—namely, vomiting—had been absent; and I can also say that, when vomiting has been induced, the convulsions have ceased.

In the ordinary run of cases the first symptom usually complained of is headache, next soreness and swelling of the throat, followed by vomiting—and we find that the aforementioned symptoms are relieved by the vomiting taking place. The healthy action of the liver is interfered with, and the bile, instead of taking its natural course, finds its way into the stomach, and is invariably found in the materials ejected. Hence the importance of giving an emetic at the onset of the fever, if vomiting have not occurred. We may to a certainty judge, for our guidance, of the presence of bile in the stomach by the appearance of the tongue; if this member be covered, or only partially so, with a brown fur, bile will be thrown up as soon as the act of vomiting occurs.

We sometimes meet with a case of continuous vomiting, attended with extreme irritability of stomach; this condition, if judiciously managed, is not fraught with danger, as there is more to be apprehended from the absence of vomiting than when it is in excess. The perverted course of the bile points to a defect existing in the liver, which defect is one of congestion. Here, again, we are called upon to assist nature in relieving this important organ; no medicine operates so beneficially in this case as a dose of calomel and scammony. And if we take the appearance of the tongue as our guide throughout the whole period of the fever, and when it is otherwise than perfectly clean administer gentle alterative medicines to sustain the healthy action of the liver, we shall most effectually prevent dropsy from occurring, and avoid deafness and all the other sequelæ attendant on this disease.

When the stomach has been relieved by vomiting, either by the

operation of nature or art, and the liver and bowels also by the administration of an efficient dose of medicine, it is then the proper time to avail ourselves of the antiseptic property of quinine, *which drug is, according to my experience, as powerful in destroying the scarlatinal germ as it is potent in the cure of ague.* I do not hesitate to say that, if the previous injunctions as to the emetic and purgative are attended to, any medical man who has never before employed this medicine in the treatment of scarlet fever, will never employ any other when he witnesses the gratifying progress of a case only twenty-four hours after using it. He will find the pulse diminished in frequency, the soreness of throat and difficulty of swallowing scarcely complained of, obviating all necessity for the use of gargles, sponging, caustics, etc., the heat of skin most sensibly decreased, and the restlessness, frequently so distressing a symptom, succeeded by a calm composure. In the worst forms of scarlet fever, in which the blood of the patient is in a dyscrastic state, indicated by virulent coryza, discharges from the mouth, eyes, and ears, owing to the disintegration of the mucous surfaces, it is imperative to administer iron with the quinine, and suitable doses of the tincture of sesquichloride of iron, or of the sulphate of iron, should be diligently persevered with; at the same time paying strict attention to procuring a daily alvine evacuation.

Before I finish this paper, I must refer to one other subject connected with the treatment of scarlet fever, which I regard almost as important as the use of quinine itself. This is the disinfection of the sick room by the employment of chlorine; and here I must differ from what Dr. Budd's experience has led him to say on this subject. I quote the passage to which I refer:—"Many medical men are in the habit of fumigating the sick room, either constantly or several times a day, with chlorine or sulphurous acid pending the whole course of the fever. There can be no objection to this measure, but I do not myself attach much importance to it. Experience of the largest and most decisive kind has shown that chlorine—and I believe the observation applies equally to the other chemical agent—in the degree of atmospheric impregnation respirable by man, has no appreciable influence in preventing the spread of infectious disorders". Dr. Budd has not told us in what manner he has employed disinfecting agents, chlorine more especially, to enable us to judge whether his method of using them were likely to be efficient or not.

My experience of the beneficial effects of a free use of chlorine is directly opposed to Dr. Budd's views; and I am able to state from my own observation that, if this gas be properly used in the sick room of the patient, *the contagion of scarlet fever will be confined to that room.* My method of using it is as follows. I direct large coarse towels to be saturated with a solution of chloride of lime, and hung over the backs of chairs, and a sheet to be hung in front of the bed-room door. We may judge of the quantity required for disinfecting the room by smell and taste on going into it. This process should be continued throughout the course of the fever.

I have always found the effect of breathing the chlorine to be most refreshing to the patient and most soothing to the throat; for frequently, when patients have complained of a difficulty in swallowing previously to its being used, directly they have breathed the gas they have exclaimed, "I can breathe much better now".

I could give numerous instances of the power possessed by chlorine in localising the scarlatinal poison. I will confine myself, however, to one as a type of the others; and I select this instance on account of the unusual opportunity I had of watching the progress of the case from the commencement, when it showed signs of being most severe, to its termination. I extract this case from short notes made at the time, giving the treatment employed for the subjugation of the fever.

Two years ago I was on a visit to a family in Scotland, where I stayed three weeks. On the morning after my arrival, the lady of the house came to me in great tribulation and asked me to see her little girl, eight years of age, who, she feared, had scarlet fever. This lady, two years previously, had lost a girl from scarlet fever about the same age, and her second son was very nearly following his sister. The mother told me that the illness of her other children began exactly with the same symptoms as the present little girl had. She had been quite well the day before, but in the evening complained of cold and had a rigor. I learned that the child had been delirious throughout the night. She complained of intense headache, her throat was very painful, the tonsils were much swollen and of a deep red colour, and she had great difficulty in swallowing. Her eyes were blood-shot, and she had been repeatedly sick. Her skin was burning-hot, and there was a rash all over her body. Pulse 120; tongue very foul, and her breath very fetid; great restlessness and intense thirst. I first saw her on the 9th of August, at 10 A.M. I ordered one grain of calomel, and one grain of James' powder, to be made into a powder with some sugar, one to be given every four hours; a teaspoonful of the effervescing citrate of mag-

nesia to be given one hour after each powder. Small pieces of ice and iced water to quench the thirst. This was very grateful to the child. The air of the room was impregnated with chlorine in the way described. When I saw her at 7 P.M. the child was better. She had taken three powders. The sickness and headache had left her. Her throat was less sore on swallowing; she having felt almost instant relief from this symptom the moment she breathed the chlorine. She had had several most offensive watery evacuations throughout the day. The rash and heat of skin remained the same. The tongue had quite changed its appearance from the brown colour of the morning, to a red, chalky condition. I ordered the powders to be left off, and no other medicine to be given until the morning, when she was to have a dose of the citrate of magnesia. On August 10th, the rash, which yesterday was of a dingy red, this morning was a vivid scarlet. The burning heat of skin and quickness of pulse remained the same. I ordered her one grain and a half doses of quinine, with ten-drop doses of dilute sulphuric acid, with tincture and syrup of orange peel to be given in water every six hours. Her diet was beef-tea and bread. When I saw her at midnight I heard that she had fallen asleep at 7 P.M., and remained so until that time. On the 11th, the child was in all respects better. She had slept until 3 A.M.; awoke, and fell asleep again. The rash still continued. The pulse was less rapid, the heat of skin less, the throat more comfortable. She felt so well that she wanted to get up and be dressed. The tongue was more furred to-day. I ordered her a dose of scammony and calomel to be taken at night. On the 12th she was much better. The eruption was paler, the tongue cleaner, the pulse reduced to 95. The result from the powder was a healthy evacuation. On the 13th, the eruption had faded away. The patient was ordered to have a warm bath at night. It is unnecessary to continue the history of this case. The child went on for three weeks upon the same treatment, and never had a bad symptom—taking her quinine every six hours, with an occasional aperient at bed time, with beef-tea for her diet, and a warm bath every second night. Desquamation proceeded most satisfactorily, and at the end of this time her skin had resumed its normal character.

I attribute the short duration of the rash to the effect of the quinine and acid, as ever since I have employed these remedies I have found that the continuance of the rash is rarely beyond three days. On the other hand, I have often observed that, in cases where ammonia or chlorate of potash have formed the basis of treatment, the rash has lasted for a greater number of days.

The house in which this child was ill, was full of visitors, children, and servants, yet every one of them escaped the infection of scarlet fever; and I am unable to attribute their immunity from the disease to any other cause than the free use that was made of the disinfecting power of chlorine.

CAN THE PUBLIC HOSPITALS AND DISPENSARIES OF THIS COUNTRY BE SO ADMINISTERED AS TO CONDUCE MORE TO THE WELFARE OF THE COMMUNITY?

By D. H. MONCKTON, M.D., F.R.C.S., Rugeley, Staffordshire.

THE writer's answer is: "Yes, by infusing largely into their constitution a provident and self-supporting principle." While Christian charity demands the relief of want, suffering, and misery in our fellow-creatures, from what cause soever proceeding, it is very generally admitted that the indiscriminating distribution of our bounty tends often to the pauperising and demoralising of its recipients; and it is a matter of common observation that towns, in which charitable endowments of a purely gratuitous character abound, become very frequently the residence and resort of an idle, thriftless, and immoral population.

It becomes the philanthropist, therefore, leaving the strictly pauper class to the legalised charity of the Poor-law, to consider how he may so aid and assist the struggling mechanic and peasant as to prevent his falling into pauperism, or losing his independence and self-respect by being involved in a hopeless state of debt. To this end, provident institutions provided for him tend greatly to encourage provident habits in him. It is, with all classes of society, too common a mistake to estimate wealth by income, rather than by the relation of income to expenditure; to strain every nerve to increase the former, while careless to diminish or control the latter; the speculator is too busy in the city to examine his household expenses; the artisan toils at overtime tasks while waste is in his cottage; the workman joins in a strike for an increase of a shilling or two to his weekly wages, though he might easily save a larger amount by a more thrifty application of his earnings. The writer of this paper

remembers to have seen on the table of a labouring man a list of articles, scratched down by the wife, to be obtained in the neighbouring town on the Saturday night; the prices attached to each small item being at least double those for which they could be obtained, if purchased judiciously and in larger quantities. In the present day, much has been done, and is being done, to induce the working man to foresee and provide for the requirements of himself and family. The local savings' banks, the more recently established Post office banks, the Government life assurance and annuity scheme, the friendly societies, co-operative stores, clothing, shoe, coal, and blanket clubs are contributing greatly to the comfort and well-being of the families of working men in health; but it is sickness in the house which so greatly increases the daily expenditure. In middle class households, do we not see everything give way before the thought of relief to the invalid? the business, pleasure, or work of the house is stopped; at any cost or sacrifice quiet; silence, every necessary food, medicine, nursing, and medical attendance must be had. But what if the family be poor? What if the bread-winner himself be the sick one? Are not the feelings the same in that house? All who have gone in and out among the poor must remember the pale wan look of the wife or mother of the suffering husband or child.

What is wanted to give them something of the solace in illness which their wealthier neighbours enjoy? First, and foremost, it is essential that the bread-winner or winners should belong to a sound, safe, and well managed sick pay assurance society; and, of the many forms of such clubs (the Government at present declining the responsibility), the writer gives the preference neither to the small village pot-house club, nor to the universal association with its central metropolitan management, but rather to the district society, founded and arranged by a committee of noblemen, clergymen, etc., with the aid of competent actuaries. Such an association is usually large enough to be safe, and small enough to be well within the cognizance and control both of managers and members. It is inexpedient, however, that women and children should subscribe for sick pay; the mother may be ill, yet able to prepare the meal, to dress the children; her illness or her child's is mainly a loss as involving a doctor's bill. For these, therefore, and to include men too old or unhealthy for the sick-pay clubs, a dispensary is highly advantageous. Some of these have been purely gratuitous charities, subscribers giving tickets to their sick neighbours who are then attended free of charge; others, again, divide the cost of attendance between subscribers and the sick they recommend, the latter paying a small sum when requiring medical aid; but neither of these encourage providence and independence in those of limited yet regular incomes, while this is accomplished by the self-supporting provident dispensary or purely medical club. The mechanic should not, and does not as a rule, desire the unremunerated services of a doctor, or wish the rich to pay for such services rendered him; bring the article within his reach, and he will prefer to pay for it. As an arrangement between medical man and working man, the provident dispensary is undoubtedly equitable and convenient, although, like the best of everything, liable to some abuse. As affording an opportunity to the benevolent to aid the deserving poor at their time of greatest need, it is most valuable; for, while the members choose to pay their own medical attendants by small weekly contributions, in health as well as sickness, an honorary fund, administered by a committee and the medical officers, may be the means of affording an immense amount of comfort to those who have proved themselves worthy of assistance by their provident connection with the institution. Abuse of, and imposition upon, such a dispensary may perhaps be feared in large towns in which the inhabitants must be but little known personally to any committee; but even in such, the medical attendant would be well able to assist the committee, to prevent its being as much imposed upon as are the large hospitals of large towns.

Such provident self-supporting dispensaries are especially suitable for smaller towns, and the district within a radius of four or five miles, including a population of perhaps less than 10,000 inhabitants. In August, 1866, such an institution was founded in a town containing 4,362 inhabitants, and extending its operations over six parishes, containing in all 7,615 souls; and, although a number of men, women, and children were already members of sick pay clubs, yet so rapidly did the new institution become popular with the working class, that 500 enrolled themselves members within six months, 1,000 within twelve months, and, at its second anniversary, 1,400 members were connected with it; and, in proof of the good opinion entertained of the working of this dispensary by the benevolent lookers on, it may be mentioned that its honorary fund amounted in the first year to £61:13:6; in the second, to £59:4:6; and, at the commencement of its third year, a bazaar held in its behalf, conjointly with a cottage hospital, realised a clear profit of £500.

The rules of the institution referred to are annexed to this paper; but the main features are the following:—1. That its members shall be strictly of the working class. 2. That the payment shall be one penny