Globules.—These are not necessarily augmented; generally speaking, they retain their normal standard; in rare cases are increased; in others diminished. As the inflammation advances the globules may fall, but this is the effect of blood-letting and abstinence. We have already seen that plethoric persons are not more disposed than others to inflammation.

Solid contents of serum.—The albumen may be increased, but not necessarily, and the inflammation may attain a very high degree of intensity, without augmentation of the serum.

Physical Properties.—The clot is generally very firm and tenacious, because the fibrin has expelled a great portion of the serum; in fever, on the contrary, the serum is retained, and renders the clot soft and voluminous. In inflammation the clot is small; for as it contains a large proportion of fibrin, the globules are firmly pressed together by the contraction of the coagulating part of the blood.

PHENOMENA OF INFLAMMATION EXPLAINED.

Whenever inflammation terminates in suppuration, the quantity of fibrin increases; hence, the formation of pus and augmentation of fibrin accompany one another; we might, indeed, add another phenomenon, viz. the formation of false membranes. The fibrin is also augmented in cases where the serum is turbid and mixed with flocci; on analysing false membranes they are found to be composed of fibrin, and this is confirmed by a comparison of false membranes with the buffy coat of the blood, to which they bear a perfect resemblance.

Pus is a compound fluid, the composition of which is not yet accurately known; we are unable to assert that it is formed of fibrin, but in certain kinds of pus we find a white substance analogous to fibrin. We may now ask, how does the composition of the blood throw any light on the formation of false membranes? In the first place, we are never able to detect any increase in the quantity of fibrin until the symptoms of inflammation are quite patent; perhaps the increase is too small in the beginning to be appreciated. In some cases we cannot discover the exciting cause of inflammation, in others we can, as a blister, for example; here we find no antecedent change in the blood; hence we may conclude that inflammation arises independently of any precedent modification of the blood; the same occurs in cases of burns.

Fever exercises no influence on the changes which take place in the composition of the blood. According to Tomasini, inflammation cannot arise unless the constitution has first undergone some change; every local disease is preceded by some general condition, which the Italian physician calls diathesis.

REMEDIES EMPLOYED IN INFLAMMATION.

Our task would be incompletely executed, did we not examine how far the state of the blood may throw some light on the treatment of inflammation; but we must consult experience first, and then theory. Were we to depend on the latter, we should conclude that blood-letting is less indicated in inflammation than in fever, because its effect is to diminish the quantity of globules, and

not the fibrin; but, again, we would observe the value of bleeding must be decided by experience. Medical opinions are much divided on the efficacy of revulsives in inflammation; some assert that it is increased by blisters; this idea is principally supposed by Tomasini; others think, on the contrary, that blisters act beneficially, by determining an irritation of the skin; others, finally, would limit the use of blisters to certain periods of inflammation. Experience, in fact, shows that blisters aggravate inflammation, if applied at an early period: even in chronic inflammation they are injurious when unseasonably employed. Reasoning on the facts derived from humoral pathology, we should say that large blisters must increase the quantity of fibrin, since they excite local inflammation, occasionally accompanied by fever; but independent of this first effect, we have another, consisting in the abstraction of fibrin from the circulation; but this second effect is never sufficiently great to counteract the former one.

Boiling water, tartar emetic, &c. act in the same way as blisters; sometimes nothing but serum is removed from the blood; in other cases serum and fibrin. The dermis acts as a kind of filter, and prevents the globules from passing through. Some remedies have the effect of determining perspiration to the skin; others determine to the intestines. Aloes produce copious liquid stools, composed chiefly of serum coloured by the bile; other purgatives excite the secretion of mucus, or merely of bile; it is difficult to say what effects such remedies produce on the blood. Some physicians regard the preparations of mercury as antiphlogistic. Granting this to be the case, can we explain their action? Mercury, it is said, renders the blood less coagulable, in other words, diminishes the quantity of fibrin; but this is mere hypothesis. In the next article will be examined the state of the blood in congestion and hæmorrhage.

CASE OF NON-MALIGNANT FIBROUS TUMOR OF THE SUPERIOR MAXILLA.

REMOVED BY EXCISION.

By CHARLES LINGEN, Esq.

SURGEON TO THE HEREFORD INFIRMARY.

(Read before the York Meeting of the Provincial Medical and Surgical Association.)

ON April 29, 1841, Eliza Roberts of Newton, æt. thirty, married, and having several children, was admitted into the Hereford Infirmary, under my care, with an indurated fibrous tumor, embedded in the left superior maxilla, and apparently having its origin about the roots of the two lateral incisors. Her general health is not bad though delicate, and has been better since marriage.

The tumor has now attained the size of a hen's egg; its base occupies the site of the two left lateral incisors, which have fallen out two or three months since, but has greatly extended that space by pressure, so that the teeth, right and left of the tumor, are now separated by $1\frac{1}{2}$ in. or thereabouts, and the tumor extends itself to the right beyond the septum of the nose, and, to the left, overlaps as it were, the first bicuspid; within the cavity of the mouth it protrudes, but not deeply, half-way along

the hard palate; the summit reaches nearly to the floor of the orbit. To the touch, it feels uniform and very hard; is not painful, and has not been painful from the very first, and has no tendency to bleed; two pale ulcerations mark the spots whence the teeth dropped out.

She first observed it seventeen months since, soon after the birth of her last infant, which she continued to nurse up to this time; it was *then* small and hard, and as it gave no uneasiness, it scarce attracted her attention for the first six or eight months, during which time it made but little progress; it now began to grow faster, and the teeth to loosen, but for the last month only the augmentation in its bulk has been rapid.

The operation.—On May 7, the business of weaning being now ended, I removed the tumor, assisted by my colleagues, Messrs. Braithwaite and Cam, and other friends. The right central incisor and last bicuspid were first extracted; an incision was now made through the integuments to the bones, from a little below the inner angle of the eye, passing round and detaching the ala nasi, and terminating along the central fissure of the lip; the other incision ran from the prominence of the cheek, and was made to fall just within the angle of the mouth: the flap which resulted from these incisions was turned up and detached from the tumor, the infra-orbital nerve being divided; the scalpel was next passed along the floor of the nares, dividing the septum; and the nose being held to the right side, one blade of Liston's strong cutting-forceps was introduced within the right nostril, opposite to the place just occupied by the extracted incisor, the other within the cavity of the mouth, and were thus made to divide all the structures between them, comprising the alveolar ridge, hard palate, &c.; the ascending plate of the superior maxillary, and that part where it joins the floor of the orbit, were next divided in the same manner; the forceps were now applied to the alveolar ridge, whence the bicuspid was extracted, and this part of the bone divided upwards as far as the floor of the orbit. It now remained to lift the tumor from its bed, in doing which I experienced some difficulty, (much greater, I imagine, than if I had sacrificed the whole of the superior maxilla,) but it was soon accomplished. The cavity of the antrum was now exposed, and some suspicion being entertained that its aspect was not healthy, I was induced to remove what remained of it, with the sacrifice of two other teeth; but I am disposed to doubt the necessity of this latter procedure, as the tumor itself was evidently removed entire. The hæmorrhage was not great, and though two small vessels were tied, they were cut away before dressing the wound. The cavity was filled with dossils of wetted lint, and the flaps brought together by three twisted and several smaller sutures; water dressings were applied externally, and no plasters used. She was able at once to swallow, and was very little shaken by the operation.

20th. She may now be considered *well*, and will leave the infirmary in a few days. The febrile action following the operation was remarkably slight; indeed, she has not had an unfavourable symptom. For some days there was stillidium, which made me fear the lachrymal sac had sustained some injury, but this has disappeared entirely. The sensibility of the flap is much obtunded by the loss of the infra-orbital nerve. She swallows solids with

ease, but liquids with some difficulty; in this particular also she improves; there is comparatively little deformity, and her articulation has not suffered materially. Every line of the flap united by the first intention; the smaller sutures were removed in eighteen hours, the twisted ones in thirty.

July 12th. I have seen my patient repeatedly since she left the infirmary. She now experiences still less inconvenience as respects articulation and deglutition: in fact, almost *none*. Some granulations sprang up in the nostril, which soon yielded to the application of nitrate of silver.

Aug. 2nd. I have heard nothing of Roberts since the last date.

August 2, 1841.

ON THE LOCAL ABSTRACTION OF BLOOD IN GONORRHŒA,

OCCURRING IN THE MALE SUBJECT.

By P. BENNETT LUCAS, Esq.

I WAS led to try the effects of taking blood from the penis, in the acute stages of gonorrhœa, by opening its dorsal vein, in consequence of the very free and full anastomoses which anatomy reveals to exist between it and the venous plexus, which so essentially contributes to form the corpus spongiosum urethræ.

Some time since, when at work in the dissecting room, I inserted a pipe into the vena magna, for the purpose of throwing some injection into it, with a view to make a preparation of the penis. Having secured the pipe by means of a ligature, and having next distended, by inflation, both corpora cavernosa, I carefully threw in some tepid water; when, without having used much force, I was not a little surprised to find the water issue from the orifice of the urethra.

To ascertain the nature of this communication between the veir and the mucous membrane of the urethra, I proceeded with more caution, and having distended with air the corpora cavernosa to their fullest extent and secured the opening by which I did so with a ligature, I placed the organ in warm water, and threw into the vein, with a moderate force, some fine wax injection, until a small portion of it appeared at the urethral orifice. The parts were then placed in cold water, and I examined them the following day.

Leaving as a guide the delicate shred of injection which protruded from the orifice of the urethra, I laid open this canal to the extent of four inches, by dividing its under surface, and cutting through the corpus spongiosum urethræ, which was filled with injection. I then followed the loose shred of wax which lay in the urethra, and found that it led to the lacuna magna; from which orifice the injection evidently made its way into the canal. My next object was to follow the injection in the lacuna, but this I was unable to do with any degree of accuracy, on account of its being very soft. The removal of the mucous membrane was done with facility, being, as it were, moulded on the injected vessels, and only connected to them by the fine sub-mucous cellular tissue in this situation.

Now, I do not wish it for a moment to be in-