livered of her first child 14 months previous to admission, and had severe shock and hemorrhage, but her condition was not recognized by her physician. She had a slow convalescence but finally got up and tried to resume her household duties, but could not perform them. At each monthly period she flooded profusely. Finally, after a year of suffering and weakness, she sought advice of another physician, who examined her and made the diagnosis of a uterine polyp. He gave her ether with the intention of removing it, when he discovered the nature of her trouble, and desisted. He advised her to enter a hospital, and in fact she did enter a large general hospital. Here it was proposed to remove the uterus *per vaginam*, but she did not feel satisfied to lose her uterus, and left the hospital and entered my service. On examination the vagina was found to be occupied by the inverted uterus, which bled freely on the slightest touch. It was about the normal size, or only slightly enlarged, felt hard and was quite irreducible. Its position was such, and it occupied the vagina so fully, that any attempt to remove it or reduce it by Kuestner's method would have been difficult in execution.

The patient was very anemic, and the flooding at the last period had been so severe that her life had been considered in great danger at that time. The next period was due in a few days, and it seemed best to do nothing until that was safely over. She was therefore put on generous diet with iron, etc., and when menstruation came on the vagina was kept firmly packed with gauze, and the foot of the bed was well elevated. In this way loss of blood was prevented almost entirely. At the operation, which was performed a week later, I had the efficient assistance of Dr. Elizabeth Riley.

When the abdomen was opened the patient was put in the Trendelenburg position, and the intestines being packed out of the way and covered with pads, the funnel of the inverted uterus could be seen at the bottom of the pelvis. I was much pleased to find that gentle traction on the round and broad ligaments brought the uterus up, and when to this was added moderate upward pressure by the hand of my assistant in the vagina, the top of the funnel, with the ovaries and tubes, could be easily brought outside the abdomen.

I now attempted to dilate the funnel with a Sims' dilator, and when it was somewhat enlarged I used a Goodel dilator. The tissues were exceedingly dense, and gave very little and very slowly. Still, something was gained, and moderate taxis in the vagina and moderate traction on the round ligaments kept all that was gained. It was slow work, but I knew that in the long run the steel dilator must overcome the resistance of the uterus, and I was more afraid of tearing than of delay. After about 20 minutes of dilatation and traction, with aid from the pressure through the vagina, the organ was all reduced except the fundus itself, and I was afraid that I should have to incise the resisting tissues, when suddenly out popped the fundus and the uterus was right side out again. At the moment of reduction the peritoneal surface of the fundus tore, not very deeply, but sufficiently so to require a catgut suture. There had not been many adhesions of the ligaments and tubes in the funnel, but now the whole organ had no support and would fall in any direction; so the fundus was stitched to the abdominal peritoneum, and the abdomen was closed.

Convalescence was uneventful. The cavity of the uterus was washed out repeatedly with an antiseptic solution. The patient went home well and has had no more hemorrhages.

My experience in this case was in entire conformity with what I expected *a priori*, and I think it justifies me in claiming that the use of the Trendelenburg position is of so great advantage in 'Thomas' operation for inversion of the uterus, that with this modification it becomes the operation of election, being easier, safer, cleaner

and more surgical and satisfactory than any other. Referring to the illustrations of the original operation, where the dilatation had to be done blindly in the depths of the pelvis, it is easy to see that the method would not be satisfactory today. In fact, I could never have succeeded in this case by the original method. It is very different, however, when the uterus is brought up to or outside of the abdominal wall, when the intestines are out of the way and well covered up, so that there need be no hesitation in taking plenty of time for the dilatation. If it is objected that not all cases would permit of thus lifting up the uterus, I would reply that, at any rate, by opening the abdomen we can find out whether the organ can be brought up and whether there are adhesions present, and as the ligaments are always relaxed and elongated there is every reason to suppose that they will in all cases permit of the substantial elevation of the uterus to a point where dilatation can be employed under the guidance of sight.

VARIOLA, OR SMALLPOX.¹

BY JOSEPH E. DUXBURY, M.D., LONSDALE, R. I.

THE subject I have chosen for my paper tonight is one which the general practitioner of today is necessarily unfamiliar with, and it is only through some unforeseen circumstance that we are enabled, in this country at least, to study this dreadful disease. It is only upon the advent of a local epidemic or an occasional isolated or sporadic case that we meet with it at all, and, consequently, the physician in general practice is seldom called upon to treat a case of smallpox. And although one of the great triumphs of modern medicine has been the stamping out of this terrible disease, it is still so frequently with us that we should be on our guard and, if possible, be able to diagnose it when it confronts us.

Therefore, I believe it to be the duty of a physician coming in contact with cases of this nature, to study them conscientiously, so that his observations may be of practical benefit, not only to himself but to the profession at large. It is for this reason, Mr. President and gentlemen, that I have chosen this as my subject tonight, and it is for this reason that I will try to confine myself to the cases I have actually seen rather than to a discussion of smallpox in general. I refer, of course, to the late epidemic in our own State in the town of Lincoln, and, as you know, I was appointed especially to handle the matter to the best of my ability, in the village of Manville, where the epidemic was in progress. The importance of diagnosis and the difficulty of diagnosis was well shown in this epidemic by several physicians of large practice, openly stating that it was not variola at all, but chickenpox, and I believe no one was able to positively diagnose

¹ Read at the Annual Meeting of the Pawtucket Medical Society.

the disease but the physicians who were brought in direct contact with it from day to day.

Although this paper is intended to apply more to our recent epidemic, I think it advisable in the beginning to present an outline of the principal symptoms of smallpox as laid down in our works on "Practice."

Variola, or smallpox, is designated as a specific contagious and febrile disorder, characterized, when unmodified, by the appearance in succession upon the cutaneous surface and occasionally also upon the mucous surfaces, of papules, vesicles, pustules, crusts and cicatrices. This *succession* of lesions characterizes the disease smallpox. As is well known, the variations of this malady as to the severity, character and duration of its symptoms are so great as to preclude the possibility of its complete description in a paper of this kind, still, it is nevertheless necessary, for purposes of comparison, to outline a typical case of the disease.

The period of incubation varies from 10 to 20 days, and usually occupies about 14 days. It is ushered in by a chill, succeeded by a fever, with a temperature of 103° to 105°, which is commonly associated with characteristic pains in the loins, headache, nausea and vomiting, and in young children, occasionally convulsions. During this stage a condition of erythema may exist, especially in menstruating or pregnant women, which is a positive sign that we have a disease of unusual severity and possibly smallpox to deal with. This symptom has been mentioned by some authors as being characteristic of the disease, but you will find that they always depend for a positive diagnosis upon other corroborative symptoms, for example, the pain in the back and loins and headache, which are characteristic. On the third or fourth day after the appearance of the efflorescence, the patient will be seen with the face and scalp covered with pin-head sized and larger, *firm conical papules*, feeling, as has usually been described, like gun-shot under the skin. Later, these develop on the trunk and limbs, and in well-marked cases every portion of the surface of the body is invaded, including the palms and soles, and when found in the latter situations, being quite diagnostic. As a rule there is complete defervescence when the exanthem appears, the patient feeling quite relieved. During the first two days of the eruptive period the papules increase in number and are correspondingly agglomerated, with the color changing to a darker red; and if they are watched closely at this time, a little lymph will be seen to appear in the summit of each, gradually developing into vesicles during the next two or three days.

From the fifth or sixth day the contents of the vesicles which have formed will begin to take on a milky appearance from the admixture of pus-corpuseles, so that by the eighth to the twelfth day pustules have fully formed and the disease has entered the *stage of suppuration*, the process beginning, as in all the metamorphoses of the disease, in the lesions of greatest age. Beginning with the appearance of the vesicular element of

the papule (which has now attained the average size of a pea) a peculiar umbilication will be observed, which is one of the most characteristic diagnostic points of the disease, especially when the edge is corrugated or has the appearance of being divided into compartments, which finally shrivels and dries up or gives way to distention and rupture and the formation of crusts. At this time the patient is usually in a most distressing condition. The skin between the lesions is red and swollen, and owing to the tumid eyelids, the edematous lips, disfigured nostrils and pus-obstructed mucous outlets, the features are almost indistinguishable. Itching of the surface is now almost unbearable, and very often the amount of disfigurement resulting is governed by the ability of the patient to resist this temptation.

The *stage of dessication* occurs about the twelfth day of the disease, beginning in the lesions of first appearance. As the drying continues, the redness, tenderness and edema of the skin lessen and the patient assumes a more natural appearance. At first the crust is quite adherent, but about the fourteenth day it becomes loosened and falls, leaving a reddish brown stain which lasts for five or six weeks. Pitting of the skin as a result of the lesion does not always occur, and in fact is less common than many suppose. This point has been used a great deal by men who never saw a case of the disease, to prove the non-existence of smallpox. But when we remember that pitting depends upon violent removal of the crust by scratching or otherwise necessitating a renewal of the scab, it is easy to see why it may occur or be prevented. This is further proved by the fact that chickenpox very often leaves cicatrices to mark the site of the disease. Again, the young people of this country at the present time are more particular and careful of their personal appearance than persons of the past, especially of foreign birth, and in this country nearly all of our smallpox patients, especially severe cases, are treated in hospitals where removal of the crusts is guarded against instead of leaving the patient to himself and his temptation to scratch.

Dessication usually requires from 2 to 15 days for its completion, after which convalescence begins, so that from 4 to 6 weeks are required to complete a cure in a typical case of variola of moderate severity such as I have described.

As regards *treatment*, I will say that outside of rigid and proper hygienic care of the patient the less medication he receives the better he will get along. To be sure, complications that may arise must be promptly dealt with. This is another point the antismallpox agitators enlarge upon. They say it cannot be variola because when not treated at all the patients get well. I admit this; but when they say the cases were not treated at all they mean they were not dosed and filled up with drugs, but it is very probable that the hygienic necessities of the case were carried out to the letter, and we all know that this is very important and efficacious treatment in any case,

and not confined to smallpox alone. I think we will agree that uncomplicated cases of scarlet fever, measles, etc., get along very nicely if only proper hygiene is carried out, so that, to my mind, it is foolish to claim that this cannot be smallpox because it was not necessary to feed the patient with drugs.

In conclusion I will compare the foregoing description of a typical case of smallpox with cases coming under my personal observation during the recent epidemic in Manville. As we all know, the majority of the cases referred to were of a mild form, and in this respect they correspond with cases that have been reported in different parts of the country within the past year or two; and although there seems no doubt in the minds of those members of the profession who were brought into most direct contact with the disease, there were a few who were ready to claim that it was not variola at all, but varicella, or chickenpox. As for my own opinion, after handling over 50 cases, I am positive it was genuine smallpox we had to deal with. Opinions to the contrary were readily volunteered by laymen who were not supposed to know any better, backed by a few medical men who not only had not seen one of the cases they claimed to know all about, but had never seen a case of smallpox at all. It is true the disease was of a mild form, although we had three or four very bad ones in which the eruption covered nearly every bit of the external surface of the body—but must every patient die in order to prove a diagnosis of smallpox? Must every patient with scarlet fever or diphtheria die before we will admit the nature of the complaint? The late Professor Loomis once remarked to me that he had never seen a genuine case of diphtheria recover, and although that may have been true at that time, it certainly is not the case to-day, because great improvements have been made in the care and treatment of diphtheria, and I am sure they have been equally as great in variola. As to the cause of the mildness of the recent epidemic throughout certain parts of the country, I do not pretend to dogmatize, but it seems plausible that, inasmuch as the disease has been nearly entirely obliterated, the severity of certain cases may have been mitigated. I surely can see no reason why we should not have a mild case of smallpox as well as a severe case.

It is well known that certain epidemics of scarlatina are mild, while in others the death-rate runs high. The claim has been made that the disease did not follow the symptoms as laid down in our textbooks, and that has been partly admitted by the other side, but I go further, and say the symptoms and the succession of lesions (which I claim is diagnostic) in the cases coming under my notice were almost identical with those taught in our works on diseases of this nature, the only difference and variation being in their severity.

As in the beginning of this paper, I say that variola is distinguished by certain symptoms and lesions, such as headache, pain in back and loins, followed by the appearance of papules, vesicles,

pustules, crusts and cicatrices, and it is the regular succession of these symptoms that is diagnostic of the disease, and in the 50 cases I saw they were typical in this respect. The headache and pain in the back were so marked that it was common to hear the patient say he knew he was going to have the disease from the severe headache.

The average age in 51 cases coming under my notice was $14\frac{1}{4}$ years, which is too high an average for it to have been chickenpox, it being rare to find this disease in one over 14 years. After the premonitory symptoms and the appearance of the eruption the lesions progressed to their final destruction in regular order. The shot-like feeling, the vesicular element, the umbilication and the corrugated appearance were all present one after another, and finally cicatrices were left to mark the site of the disease, although more marked in some instances than others. Varicella, or chickenpox, does not run this regular course. From the appearance of the rash in the beginning in any form, they seem to jump into the form of a scab. It is not even a crust, as in variola, but a fresh scab, and, as one author says, "the child can easily rupture the vesicle," which is a good point. The vesicle of variola is very tough and goes on almost to the end without rupture, and, in fact, often does so, while this, I may say, never occurs in chickenpox, all the vesicles rupturing themselves even if left alone.

Finally, I will say that the eruptive disease occurring in the epidemic in Manville during the months of June, July and August of the present year was positively smallpox, and although I realized a negative diagnosis would have been hailed with delight by the community, I could conscientiously form no other opinion.

It is true there were persons who did not agree with me, but I was fortunate in having Dr. Swarts of the State Board of Health, whose ability as an expert on diseases of this nature was recognized by a subsequent interstate conference, corroborate my diagnosis.

Medical Progress.

RECENT PROGRESS IN GYNECOLOGY.

BY F. B. LUND, M. D., BOSTON.

RESULTS OF VAGINAL HYSTERECTOMY FOR CANCER.

KNAUER¹ gives a careful and interesting review of the results of vaginal hysterectomy in Chrobak's clinic, in the 10 years and 6 months from January, 1890, to June, 1900. The total number of cases of cancer of the uterus presenting themselves for treatment during that time was 1,374, or about 3.4% of about 40,000 gynecological cases. The total number admitted to the wards for treatment was 760, of whom 9 refused operation, and 1 died of an intercurrent affection, so that 750 cases remain to consider, upon 236 of

¹ Beitr. zur. Geb. u. Gynecol., 1901, II, 205