On the afternoon of the 8th day the areola has begun to form, which is very decided on the ninth. The vesicle now has the look of a bead of pearl imbedded in a ground work of a rose color, extending from half an inch to one or two inches and tumid. But we should never have redness deepening to purple, or extensive swelling—that is indicative of edematous inflammation, the result of pus poisoning or local septicæmia from pus crusts or impure lymph.

The fever should be very marked from the 9th to the 12th day, by which time the lymph has become dry and opaque. From that date to the 18th the scab or crust is in process of formation, and about the 21st day may be removed or falls off soon after, leaving an excavated depression or pit, having *a smooth central point* and *radiating bands* extending to the circumference. If the lymph has been humanized a number of *foreolations* or pin pointed depressions will appear among the radiating bands. The whole should be terminated by the 30th day, but, if violence has been used, and an irritated sore or vaccinal ulcer has been created, time will be required for the healing.

And here I would like to enter my protest against all kinds of interference with vaccinal sores, beyond cleansing with warm water and the application of a little salad oil, by means of a feather, to the surrounding cuticle, if irritable. Bandages, adherent garments, ointments, powder, and all other tamperings of the ignorant and the pretentious are to be deprecated and condemned. In these phenomena there is seldom seen a single vesicle, generally a group of them. They progress in development very regularly and gradually, seldom or never create any undue irritation or ulceration, and are attended with a well-marked and decided constitutional fever.

I have frequently applied Boyce's test or re-vaccination as a test of the constitutional effects resulting from the use of the lymph in cases where a good result had been obtained, and always with a negative result. I also inoculated six different children with virus obtained from small-pox cases, but without producing anything more than local disturbance and a slight fever. The action of this stock of lymph has always been of a benign and satisfactory character, and it has proved to us in Montreal a providential blessing by removing prejudice and opposition to vaccination.

A very frequent species of spurious vaccine is evidenced by a *pustular* rather than a *vesicular* eruption. It increases rapidly, instead of gradually, thus a raised centre is situated on a hard inflamed base, surrounded with diffused redness. It contains a fluid at no time clear, but turbid and opaque. It soon bursts and discharges an abundant irritating matter, forming, when it does, flakes of a dirty white crust. If a scab be formed or the vesicle has had the general aspect of a vaccine vesicle, and has progressed regularly, it will be found on the ninth day to contain purulent matter, and will probably dry up and fall off by the 12th day, leaving a soft sloughy sore to granulate. This affords *no* protection to the subject. Another type of spurious vaccination shows itself in the form of a perfect vaccine vesicle in its course of development; it matures early, is white or pearl colored, with a slight tinge of yellow, perhaps I ought to say at once that it is straw-colored—the vesicles seem too full, and the point of umbilication is elevated, as if ready to burst, which it frequently does, discharging an acrid purulent fluid, which is very infectious, and new pustules are created where it touches, a disagreeable sort of secondary vaccination or Boyce's test. It leaves a ragged-looking spreading ulcer, hard to heal. This is sometimes covered with a friable scab, which falls every two or three days, to be renewed again, and so on for weeks or months together.

A piece of clothing becoming adhered to one of these sluggish, soft, or, as I call them, *scrofulous, vaccine sores* is certain to cause trouble, as with its removal the surface of the sore is opened anew, aggravating its condition, and bringing upon the head of the unlucky practitioner the anathemas of the patient or friend.

This condition of things may occur with the best virus in a scrofulous subject, no matter how pure, carefully preserved or skilfully used. But it more especially and more frequently follows where long humanized virus has been used, and the greater the number of removes from the original source, the greater the tendency to this unpleasant complication.

Dr. Willan described three typical spurious vaccinal results:

1st. A single pearl-colored vesicle, less than the genuine. The top flattened, but the margins not rounded nor prominent. It is set on a hard base, slightly elevated, with an areola of a dark rose color.

2nd. This is cellular, like the genuine vesicle, but smaller, and with a sharp angulated edge, areola pale red and very extensive.