

pulp chamber with a sharp burr drill, and the removal of the pulp is generally painless, but the entrance into the canals is oftentimes very painful. How can we now fill a tooth successfully with the nerve fibres left in the canals?

Do we possess a remedy that will effectually destroy the vitality of the nerve in a short time, and at the same time keep it in an aseptic state? Without enumerating the different remedies and by whom they were introduced, I will give you the result of my experiments with another remedy which appears to have solved the problem. This remedy is formaldehyde. My observations on the effect of formaldehyde on living pulp tissue induced me to try this new remedy as regards its value in teeth after the application of arsenic. I wanted to find out if it was possible to coagulate and harden the remaining nerve fibres, after arsenic cauterization in the mouth the same as microscopic specimens are prepared and hardened with it. I commenced my experiments with the commercial 40 per cent. solution. The teeth treated were molars and bicuspids with acute or chronic pulpitis, but not such having decomposed pulps. Two days after the application of arsenic, the rubber dam was adjusted and the pulp removed with a sharp round burr drill, the pulp chamber was then washed thoroughly with the 40 per cent. formaldehyde, and a pellet of cotton saturated with the same solution placed into the chamber, and covered with cement followed with a permanent filling at the same sitting. In this manner I treated about fifty cases, and all with the same results, viz., that immediately after the application of formaldehyde, pain would ensue and increase in intensity, lasting from half an hour to four hours; in one case it lasted about twelve hours. The duration of the pain was evidently influenced by the depth of the arsenic cauterization into the root canals, so that in almost total destruction the pain was of short duration, and in imperfect cauterization it lasted longer. After the pain had subsided, the tooth was insensible to thermal changes or tappings. After this experience the results of the formaldehyde treatment appear satisfactory, but, on the other hand, the pain caused in the beginning must be considered a great drawback. It seemed to me that the pain was caused by a too concentrated solution. I tried a 20 per cent. solution, then a 10 per cent. solution and finally a 5 per cent. solution, which latter I have adopted. I also tried to obviate the pain by an addition of cocaine.

Without going into detail of all my experimenting, the following formula is the one I arrived at and am now using:

Cocaini	}	āā 1.0
Thymoli	}	
Misc exactissimi terendo, addi		
Sol. formaldehyd aquos (40 per. cent.) gutt ×		
Zinc oxid 2.0		
Fiat pasta.		