

which radiate the various branches that have been differentiated into all functional vitality. Viewed from the protoplasmic standpoint, there is no chasm which separates the lowest vegetable from the highest animal. It is the common ground upon which existences stand, and from and through which the evolutionist traces every development of organic matter.

The dentinal fibrillæ, the gelatinous albuminoid contents of the dentinal tubuli, partake of this protoplasmic character. They are without structure, and hence contain no nerve tissue. But they are composed of the elements that enter into the structure of tissue, they embrace the proteids that are found in the germinal part of the seeds of plants, and like the structureless sarcode of the protozoa, while without sentient feeling they are capable of response to external impressions. The dentinal tubuli have this albuminoid composition, and they are in relation with organized tissue. Their connection with the tissue of the pulp is continuous, and that tissue is fully organized and has an abundant nerve supply, through which the impulses originally received by the protoplasmic, gelatinous dentinal fibrillæ, are conveyed to the sensorium.

Protoplasm being non-vascular, it cannot exhibit the usual phenomena of the inflammatory process, but that there may be some of the pathological changes that attend that condition must be indisputable. If it responds to external stimuli it must also be responsive to that which is internal. If it is subject to irritation at all, the continuous application of provocatives must result in an exacerbated, exalted receptive condition, that makes it unduly and abnormally susceptible to exasperative agents. And that is just the condition of exposed and irritative dentine. In its normal condition, while the fibres may convey external impressions, it will be but faintly, and they will not be of a distinctly painful character. Under the goadings of repeated stimuli and of continuous exposure to external influences, they take upon themselves that exalted condition that greatly increases their receptive and transmissive power, and the impressions conveyed to the pulp and to its nervous filaments, and thence to the nerve centres, become of a distinctly painful character.

The dentinal fibrils being of an albuminous nature, when their connection with living matter is severed and they are subjected to the influence of the air and external agents, coagulation will be spontaneous, as this is the first step in the process of their melting and breaking down.—DR. W. C. BARRETT, in *Dental Practitioner and Advertiser*.