Abstract

In the field of forensic anthropology and bioarchaeology, there is a constant search for more suitable and reliable methods that would allow the estimation of age and seasonality at the time of death of individuals. This work is devoted to the method of cementochronology. It is a method that works with continuously growing dental tissue – a cement layer, whose regular periodic growth is closely correlated with increasing age. The diploma thesis is based on 2 sets of teeth of individuals of known age and extraction season, which come from different geographically different populations – Czech and Malaysian. The group of the Czech population contains a total of 21 teeth, the group of the Malaysian population contains 11 teeth. Histological specimens were prepared from these samples and 5 sections were analyzed from each individual, in which the incremental lines of the root cement layer were counted and the nature of the last incremental line to estimate seasonality.

The results of age estimation achieved by us in both groups, the Czech and Malaysian populations, were close to the chronological age of the individual. The average difference between these ages in the samples of the Czech population was 1,15 years, with the results being overestimated more often. The average difference in the sample of the Malaysian population was (-1,68) years, and a trend of underestimating the results is observed here. The seasonality subtracted from the nature of the last incremental line also corresponded to the values in the records in eight of the nine cases.

Thanks to the examination of samples of different origin, we can state that cementochronology is a suitable method for estimating both age and seasonality. Our results suggest that cementochronology is an age estimation method that can be used regardless of the geographical origin of the individual or the origin of the sample, ie whether the teeth are recent or archaeological.

Key words: forensic anthropology, bioarchaeology, cementochronology, life expectancy, seasonality