RESTORATION OF VOLUMETRIC REINTEGRATION ON VERTEBRATE FOSSIL USING DENTAL BASEPLATE WAX AND PLASTER

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Methods and Materials

Fragment adhesion

- Superficial cleaning of the bone was carried out using a dry brush, and then another moistened with ethanol 70%. Once dry, both sides were covered with two coats of B-76, allowing them to dry well between them.
- Fragments were cleaned with a dry brush to remove dust on them, particularly on places to be glued to avoid phase shifts between elements.
- To organize the pieces, they were separated by color and texture (each area of the fossil is different). First of all, the small elements were stuck together with cyanoacrylate (another possible adhesive is UHU Universal®) and after that, they were added to larger piece.

Volumetric reintegration

- The wax plate was removed from the water, placed on the area to be treated and gently pressed to take the shape of the gap. If the hole has a free edge, it is convenient to fold the edge of wax to generate a containment rim.
- Observation: if wax comes off the fossil, then a sandbag can be used to support the wax. The fossil is placed on the wax so that it fits again.

Results and Conclusions

As a result, both sides of the workpiece are completely filled, showing the effectiveness of using the wax as a support and the dote technique for applying the plaster.

At the end of the work, an aesthetic, integrated and functional piece was obtained. This procedure in general does not compromise other areas of the fossil, and plaster volumetric reintegration does not interfere with anatomical studies of the bone. The dental wax was choosing such as supporting for the plaster. When it is immersed in hot water, it is softened homogeneously without reaching a liquid state, giving malleability and sticky viscosity. This condition prevents wax filtering through the pores of the fossil, a difficult situation to reverse without affecting the specimen.

References

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