The Habsburg jaw

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The physician’s interest in money need not be limited to the collection of fees. Coins and medals may serve as a prime source for history of medicine and disease. The earliest artistic depictions of goitre and trichoepithelioma have been demonstrated on ancient coins. It is believed that these features are factual, and this study of the Habsburg jaw was undertaken in order to demonstrate further the validity of coin art as a paleopathological source.

The Royal House of Habsburg dominated the European political scene from the 15th to the 17th centuries. Many of their contemporary portraits are available today in the museums and palaces of Europe. The realistic style and the quality of painters and sculptors assure us of the authenticity of the facial features shown. The characteristic Habsburg face shows a prominent lower jaw (Habsburg jaw), a humped nose (Habsburg nose), and a prominent lower lip (Habsburg lip). This artistic material has been studied by both geneticists and orthodontists and it gives a firm background for assessing the authenticity of numismatic material (Figs. 1 and 2).

The chief facial feature of the Habsburgs is the protrusion of the lower jaw due to mandibular prognathism. This anomaly results from increased obtuseness of the angle between the body and ramus of the mandible. Milder forms of the condition are not rare and occur with an estimated incidence of 0.5%. Severe

prognathism may result in the lower incisors overlapping the upper ones, giving rise to a bulldog appearance, lantern jaw or hog mouth (Figs. 2 and 3). Those unfortunates with lantern jaw may have impairment of mastication and swallowing as well as difficulty with speech and inability to close the mouth. “Your Majesty, shut your mouth, the flies of this country are very insolent” was a comment hurled at Charles I upon his first visit to Spain. The truth of this remark is shown by Fig. 4.

Mandibular prognathism may not become apparent until adolescence and becomes more marked with age (Figs. 4 and 5). Modern genetic studies of the condition suggest that the dominant gene has an unknown degree of reduced penetrance, and...
The earliest medallic representation of prognathism among the Habsburgs was due to a dominant trait (Fig. 7). This conflicts with evidence from other sources. Perhaps the position of the jaw in artistic material is not suitable for accurate assessment, whereas coins and medals characteristically show profiles of the face. An alternative explanation would be the artistic licence taken by the coin designers such as is evident in some of the second- and third-century B.C. Greek coins which attribute prognathism to most of the Ptolemies and Seleucid monarchs (Fig. 8). The comparative similarity between coins and artistic presentations suggests that this assumption is not a reliable one.

Two Habsburgs, Leopold I of Austria and Carlos II of Spain, were more severely affected than the others (Figs. 2 and 9). It is possible that more than the usual amount of consanguinity contributed to the genetic background of Leopold I (Table II). When Carlos II failed to produce an heir the abnormality disappeared from the Spanish line. Perhaps other genetic defects explain the lack of an heir for the Spanish Habsburgs, with the result that the distantly related Bourbons assumed the throne. In the Austrian line the defect disappears numismatically with Joseph I (1705-11) but reappears in his brother Charles VI (1711-40). Was this an
artistic blunder or a social mis-
demeanour on the part of their moth-
er Eleanora Magdalena? When the
prognathism trait was so dominant
for 200 years, it seems strange that it
could be missing in one son but crop
up in another.

Money supplies the answer to the
question "Would a mandibular os-
teotomy have altered the history of
the world?" This question, naturally,
was raised by a plastic surgeon who
wondered if such an operation had
been available in the 16th century
whether there would have been an
improvement in the personality and
actions of the Habsburgs. The large
number of portraits and statues por-
traying the abnormality suggests that
the family was not ashamed of the
abnormality. If they had wanted to
restrict the knowledge of their ap-
pearance they could have prohibited
the appearance of their profiles on
coinage. At that time coins frequently
showed crests or religious symbols. In
the Holy Roman Empire this was the
custom, but periodically coins were
minted showing the profile of the king
and displaying the prognathism even
more obviously than did portraits. If
it was considered good politics to
appear on the coinage, then the kings
could have insisted on the use of a
frontal view which would have ren-
dered the prognathism less apparent.
That this was not the case is shown by
Figs. 2, 3, 10 and 11. The coin styles
suggest that the Habsburgs were nei-
ther depressed by, nor ashamed of,
their abnormality and, indeed, their
many portraits entice imply the re-
verse. It seems unlikely that even
modern-day plastic surgery could
have altered Philip II's (Fig. 12) de-
cision to launch the Armada and thus
change the balance of world power
which followed its defeat.

This study shows that coin art in
the depiction of disease is a reliable
source for medical history. The nu-
mismatic custom of portraying pro-

tel views of the reigning monarchs
provides better evidence for the diag-
nosis of prognathism than the tradi-
tional poses of portraiture. The pro-
gnathism of the Habsburgs is shown to
be a dominant trait (Fig. 13). The
absence of the deformity in Joseph I
raises the question as to who was at
fault—his mint or his mother?

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and 13.

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[Editor's note: For further comment on the Habsburg jaw see London Letter, p. 563.]