The Goitrous Salting Madonnas: Iconography of Goiter in Religious Portraits

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Abstract

Introduction: George Salting was an art collector, who bequeathed his collection of paintings to the National Gallery of London. The present investigation has revealed five portraits of five different artists belonging to this collection in which the Holy Mother holding the child has been portrayed with a variable grade of thyroid gland enlargement. The name Salting, applied to the Madonnas with child by Antonello da Messina, Robert Campin, Dirk Bouts, Cima da Conegliano, and Andrea del Verrocchio, denotes George Salting, the collector who donated the masterworks to the gallery in 1910. Materials and Methods: The five paintings were analyzed to determine the accuracy of the diagnosis of neck swelling and the underlying iconographical significance of this depiction, which is relatively uncommon in religious artworks. Results: The present investigation highlighted an abnormal profile of the neck of the Virgin Mary, which is suggestive of a presumptive medico-artistic diagnosis of goiter. The inclusion of thyroid swelling in a holy sitter is relatively uncommon and is related to specific meanings that the painter wanted to illustrate in the work, the reasons for which are herein discussed. Conclusions: It seems likely that the integration of the goiter in the paintings is a stylistic hallmark. Indeed, the depiction of a slight neck enlargement is most probably a rhetorical tendency of representing an idealized female beauty, especially in holy sitters, imbued by a balanced neck and graceful body. At the same time, it probably also reflects better anatomic accuracy and knowledge of Renaissance artists applied toward a more realistic and precise representation of subjects.

Keywords: Goiter, Madonnas, medical diagnosis, neck swollen, painting, Salting

Introduction

Anatomical anomalies in works of art are more likely to be noticed by the medical observer than by the layperson. It is rather challenging to identify these deformities that mirror real pathological conditions. Moreover, in this exercise, it is difficult to distinguish between abnormalities which are likely to have been present in the person portrayed and those which the artist has introduced for stylistic or for personal reasons.1,11 When anatomical variations or diseases are encountered in a painting, historians tend to speculate about the reasons they were included and their underlying meaning.

Innumerable sitters affected by thyroid gland enlargement are widespread in many European and non-European artworks spanning centuries.2-12 The inclusion of diffuse or multinodular goiter in paintings of major Italian and Spanish Renaissance artists was mainly noted in landlocked regions such as the Balkans, the Byzantine Empire, the Alpine regions of northern Italy and Switzerland, and the foothills of Apennine communities in Central and South Italy, where iodine deficiency is endemic and painters were familiar with the disease.2,10 Anyway, figures affected by goiter were also sparsely depicted by North European painters including Peter Paul Rubens, Albrecht Dürer, and Rogier van der Weyden although obvious goiter was not common in regions such as the Netherlands, Belgium, and Germany.10,11

Within this contest, it is not uncommon to find goitrous figures in portraits with religious themes in works representing the crucifixion, the nativity, and the virgin with the child. In all these artworks, the affected figures, who feature a goitrous neck, are the angels, the shepherds, the common people, and rarely the Virgin Mary. Given this, the recent observation of Apennine communities in Central and South Italy, where iodine deficiency is endemic and painters were familiar with the disease.2,10 Anyway, figures affected by goiter were also sparsely depicted by North European painters including Peter Paul Rubens, Albrecht Dürer, and Rogier van der Weyden although obvious goiter was not common in regions such as the Netherlands, Belgium, and Germany.10,11

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of five paintings with Virgin Mary elegantly depicted with goiter belonging to the Salting collection has come as a surprise.

**Materials and Methods**

In the present investigation, we explored the accuracy of our findings and the underlying iconographical significance of these goitrous Madonnas which are very uncommon in artworks.

**Results**

Five portraits of five painters all belonging to the Renaissance movement constitute the subject of this review, with particular focus on the neck of the models. When taking a close look at the paintings, it is interesting to note that the portrayed subjects show an abnormal profile of the neck with swelling, suggestive of a presumptive medico-artistic diagnosis of goiter [Figures 1-5].

**Discussion**

Although the reasons for the depiction of a goiter could be multiple, the present investigation aimed to shed further light on this tendency in the five selected works of painters from different regions. Indeed, female subjects affected by gland enlargement are widespread in many artworks. It could be too vague thinking that goiter was portrayed frequently in paintings from countries in which iodine deficiency was endemic, because, though less commonly, it appears also in works by painters living in lands where goiter was not common. It seems unrealistic that the artists inadvertently depicted the goiter unaware of the underlying pathological condition because of their high reputation. Indeed, there may be many other reasons as to why these painters included thyroid enlargement in their depiction of the subjects.

The Madonna with child [Figure 2] of Antonello da Messina was depicted in the earlier period of his career when he was still in Sicily. The sitter shows a visible neck enlargement similar to another of Antonello’s works, the Virgin Annunciate. In the hills and valleys around the painter’s hometown, the iodine deficiency was endemic; thus, the artist may have been aware of the peculiar abnormal physiognomic characteristics given by an enlarged thyroid and he may have used affected models for his portraits.

Dirk Bouts’ biography lacks of information about his early career, but it is known that he was greatly influenced by Rogier van der Weyden, under whom he may have done his apprentice. The inclusion of a goiter may be part of the stylistic hallmark inherited by van der Weyden [Figure 1], who used that trick to optimize proportions pursuing at the same time an increasing realism of the representation that was typical of the Renaissance movement. Because the inclusion of a low grade of goiter in several female sitters of the aforementioned Flemish artist was frequent, it is likely that the Bouts too was fascinated by the visual effect given by a subtle enlargement to the neck of a woman affected by a gentle neck enlargement. From the other side, van der Weyden was previously enrolled as an apprentice in the workshop of Robert Campin [Figure 3], the possible mysterious Master of Flémalle, from whom he may have copied the template derived from one neck model for subsequent paintings. This speculation is reinforced by the fact that, in Figures 1 and 3, the goiter is a low-to-moderate grade enlargement of the thyroid.

It comes as no surprise that portraits of goiters appear frequently in paintings of the Florentine and the Venetian schools under which Andrea Del Verrocchio and Cima da Conegliano [Figures 4 and 5] were formed even if Florence and Venice were not iodine deficiency areas. Representations of goitrous sitters were particularly plentiful during the Italian Renaissance; therefore, it is very likely that both artists had the opportunity to look at several female figures depicted with goiter, which may have subsequently have influenced their paintings.

In all cases, the theme Madonna with child may rise the question whether the swelling of the neck could theoretically...
be associated with an autoimmune postpartum thyroiditis. Any answer may be presumptive; however, goiters evident in postpartum thyroiditis are modest and generally reflect greater prominence of preexisting goiters due to chronic or Hashimoto’s thyroiditis. We do not know if chronic thyroiditis or postpartum thyroiditis is even premodern era diseases, but we do know that they develop less frequently or at least they are less evident in iodine deficient lands. Alternatively, in conditions of iodine restriction, the enhanced thyroidal stimulation during gestation may have promoted the formation of the goiter that has only partially regressed after parturition.[8,11] Thus, there is no reason why the painters should have used models affected by a swelling of the neck linked to autoimmune postpartum thyroiditis. And also, it seems unlikely that the five women used as models were affected by familial thyroid dyshormonogenesis to immortalize the Madonna and child scenes because the subject would have been affected by a goitrous gland since the birth with or without clinical manifestations of congenital hypothyroidism. Finally, the hypothesis that the goitrous gland was deliberately added to the sitters with an allegorical meaning to arouse pity or revulsion, to mock the represented subject, to present an autobiographical self-portrait feature, or to indicate a lower social status seems unrealistic in the thematic depictions of the Virgin with Christ.[2-4,11]

The inclusion of a goiter in the five paintings of the present investigation is in favor of a stylistic representation because all the goitrous sitters of the present paper are depicted with low- to moderate-grade swelling of the neck without any other physical signs or symptoms related to hyperthyroidism or hypothyroidism. The artists may have depicted a slight enlargement of the neck as a stylistic hallmark with the purpose of creating an idealized beauty with a more attractive neck, reflecting that in the same time, the increased anatomic accuracy and knowledge developed in that period seem the most likely. It is also possible that some of the artists were fascinated by strange physiognomies.

Conclusions

Although we cannot reject the claim that the painters used a few affected sitters as models for their Madonnas, it is more reasonable that they were fascinated by the visual effect given by a subtle enlargement to the neck of a woman affected by a low grade of goiter. Therefore, the hypothesis that the slight neck enlargement was voluntarily included by the artist to make the women more attractive, reflecting in the same time the increased anatomic accuracy and knowledge developed in that period seems the most likely.

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Conflicts of interest
There are no conflicts of interest.

Figure 3: The virgin with child (c. 1465), by Dirk Bouts, oil with egg tempera on oak, 37.1 cm × 27.6 cm (from the National Gallery, London, UK)

Figure 4: The virgin and child with two angels (c. 1476–78), by Andrea del Verrocchio and assistant (Lorenzo di Credi), egg tempera on wood, 96.5 cm × 70.5 cm (from the National Gallery, London, UK)

Figure 5: The virgin and child (c. 1499–1502), by Giovanni Battista Cima da Conegliano, oil on wood, 64.8 × 52.1 cm (from the National Gallery, London, UK)
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