

Who else might be in Pharaoh Tutankhamun's tomb (KV 62, c. 1325 BC)?

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Introduction

The discovery of Pharaoh Tutankhamun's largely undisturbed tomb in the Valley of the Kings (KV 62; Luxor, Upper Egypt) in 1922 was one of the biggest discoveries in archaeology [1]. In the meantime, an enormous plethora of studies have described its funerary content as well as the human remains (however e.g., the quartzite sarcophagus has never been lifted for any underlying structures). This tomb stirred the social phenomenon of Egyptomania and Tutankhamun is nowadays the icon of Ancient Egypt.

Surprisingly, in July 2015 a revolutionary paper suggesting evidence for hitherto unknown chambers within KV 62 with a possible hidden burial of Queen Nefertiti was published [2]. High-definition photographic scans of KV 62 by Arte Factum [3] revealed traces of two possible doorways to such hitherto undiscovered chambers. Hence, the doorway could lead to the true burial chamber of KV 62, while the burial chamber of Tutankhamun would be in fact a modified well-chamber [2] due to his sudden death [4,5]. The Egyptian Minister of Antiquities suggested the likely scenario of this being the hidden burial of Kiya, the suggested mother of Tutankhamun [6]. The possible findings based on these preliminary observations range from nothing at all behind the wall or unfinished and closed corridors to storage chamber(s) with additional treasures [7]. This caused a gigantic - controversially discussed - hype (c. 100'000 views online of the article within two months) in public and professional fora. The Egyptian Minister of Antiquities subsequently announced further detailed investigations and first additional in situ inspections were made in late September 2015. The aim of this work is to discuss the likelihood of various missing royals still being hidden in KV 62 – if so at all – based on multiple lines of indications.

Wall paintings

Earlier investigation [8] revealed e.g., that the northern wall of KV 62 was not only decorated in a different, 20-canon-grid used in the time shortly before Tutankhamun's demise and certainly not much older - but also that the yellow ochre painting was secondarily added around the figures [2]. At the northern wall decoration, Reeves presented the pictured Pharaoh to be Nefertiti as sole ruling Pharaoh Smenkhkare [2]. A line at the side of the mouth, a so-called "oromental groove", might be a distinct feature of Nefertiti in her later years, but potentially also of her eldest daughter, Queen Meritaton [9]. The new theory offers a new reading of the "opening of the mouth scene": it might not be Pharaoh Ay who performs the ritual on the mummy of his predecessor Tutankhamun but Tutankhamun himself performing this very ritual on his (female?) predecessor [2]. The later decorative usurpation by Ay would explain the newly added yellow ochre, covering previous inscriptions [2]. Thus, the northern wall with the suggested chamber(s) behind it - showing the Pharaoh before the gods - then might indeed be

not an unusually decorated burial chamber but the typical decoration of a well-chamber in the midst of a standard Royal tomb, only to have been secondarily turned into the burial chamber of Tutankhamun.

Exclusion of individuals

Chronological boundaries considerably shorten the list of potential possibly royals being hidden in KV 62. Pharaoh Akhenaton died several years before and was buried in tomb TA 26 in Akhet-Aton, Middle Egypt, and might later have been transferred to KV 55. Several of his daughters, Nefer-Neferu-Re, Setep-en-Re, Maketaton died in the twelfth year of Akhenaton's reign and were also buried in TA 26 [10,11]. Another daughter, Ankhesenamun, survived Tutankhamun [10–12]. Possibly all these individuals can be excluded.

Potentially to be found individuals

Pharaoh Smenkhkare

The true identity (including sex and age-at-death) of Smenkhkare – a possible predecessor of Tutankhamun - is quite uncertain [7]. Any unclear new male mummy from KV 62 thus should be genetically tested if he is a brother of suggested Akhenaton (Cairo Museum CG 61075) and a son of Amenhotep III (CG 61074); both would be indicative for Smenkhkare.

Queen Nefertiti (as Pharaoh Smenkhkare)

Queen Nefertiti, aged c. 30 – 35 years, - ruling as a male Pharaoh Smenkhkare [2,7,10,11,13] - may have died and buried in Akhet-Aton. Later her mummy might have been transferred to KV62. If Nefertiti – labelled in inscriptions to be Tutankhamun's' mother - is indeed the already found “Younger Lady KV 35” (CG 61072) who is genetically suggested to be Tutankhamun's mother [10–12,14], any unclassified female mummy from KV 62 would unlikely be her.

Queen Meritaton

Queen Meritaton, the eldest daughter of Akhenaton and Nefertiti and genetically suggested to be the full or half-sister of Tutankhamun with a suggested aged c. 20-25 years, may have also acted as a regent for an underage Tutankhamun [7,14]. Her burial is unknown, but some of her personal items are among the burial items of Tutankhamun.

Kiya

Her identity as the mother of Tutankhamun is debated contradictorily [10,12,14]. She disappeared in the twelfth year of Akhenaton's reign and might have been transferred to KV 62. However, her inscribed canopic jars were suggested re-used for the burial of the KV 55 male [15], yet her mummy has not been identified so far. Any unclassified female mummy shall genetically be tested against these canopic jar contents for a potential matching [16,17] or at least matching them to the KV 55 male.

Conclusion

Original inscriptions on objects - most likely to be expected of Amarna-style - will be critical for any identification. Relevant criteria for the identification of a found mummy would be sex, age at death, canopic jar inscriptions and - if ethically desirable and technically successful - the decisive genetic profile when compared to other known Tutankhamun's family member profiles [5,14].

Queen Nefertiti is quite likely to be the already found "Younger Lady of KV 35" and the canopics of KV 55 appears to be the ones of Kiya, making a separate burial of her mummy in KV 62 rather unlikely. Therefore, a potentially to be found male mummy might be the one of Pharaoh Smenkhkare, if female the one of Queen Meritaton.

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During the Tutankhamun conference 2018, the results of the third and final georadar scan were announced: It is highly unlikely that there are hidden structures or mason's work behind the wall of the burial chamber [18,19]: "Our work shows in a conclusive manner that there are no hidden chambers, no corridors adjacent to Tutankhamun's tomb," said Francesco Porcelli [19].

It leaves the question to explain the obvious alterations of the northern wall, without claiming a hidden burial behind it. It is still puzzling, that depictions of the King before the Gods actually belong to the decoration concept of a well-chamber in the middle of a royal tomb rather than to a burial chamber

The facial reconstruction made from the face of the younger Lady from KV 35, presented earlier this year are in fact convincing [20].

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