

The Medici Project

Prof. Donatella LIPPI

The Medici were the most illustrious family in Renaissance Italy. For three centuries they were interred in the chapel of San Lorenzo in Florence, where a paleopathological team is engaged in examining their remains. Findings on the disorders that afflicted the Medici will shed light on the evolution of diseases that affect mankind today.

On 25 May 2004, an international team of palaeopathologists, anthropologists, historians and archaeologists descended on the church of San Lorenzo in Florence. They were officially inaugurating the Medici Project, a palaeopathological research programme being undertaken in one of the city's most beautiful churches whose Chapel is the final resting place of many of the leading Medici.

The Medici, one of the world's most powerful families, ruled Florence during the golden era of the Renaissance. Not only were they major patrons of art and culture, but through their wealth and their political acumen, they married into the royal houses of France and Austria and, in the XVIth century, produced two Popes, Leo X and Clement VII.

No other family epitomizes the full glory of the Florentine Renaissance better than this dynasty and Lorenzo the Magnificent can rightly be regarded as a brilliant light which illuminated not only the city of Florence, but the whole of Italy and the world beyond.

As members of the ruling class, the Medici were entombed upon their deaths and great care was taken to preserve their remains. From the XVth century to the end of the XVIIIth, they were buried in the Old Sacristy and the New Sacristy of the Chapel of San Lorenzo, which had long enjoyed the family's patronage.

In 1857, it was discovered that the coffins, then free-standing above ground in these rooms, had been plundered. In consequence, most of them were transported to the crypt of the Church, for protection. Only those remains preserved in the marble tombs in the Old and in the New Sacristy were left in their original state.

During the Second World War, the Michelangelo statues above the marble tomb in the New Sacristy were removed to safeguard them from bombing. At the same time, the marble slabs covering the tombs were removed and the contents examined by a group of anthropologists appointed to carry out an 'anthropological-historical study of the bones.' The researchers left no record of what they found apart from some general studies. However, they seriously damaged the remains, because, in accordance with the prevailing anthropological methods of the day, they 'shaved' all the skulls, in order to measure them.

Nowadays, the Medici Project can be supported by new methodologies and by more advanced research techniques, in line with the most recent advances in palaeopathology.

Palaeopathology is the scientific study of the morphological remains of the diseases that occurred in the past. Only in the last few decades has it come to be regarded as an autonomous discipline, in which archaeology, physical anthropology and pathologic anatomy all play a part.

Through the examination of human remains, palaeopathology combines the methodologies of archaeology, physical anthropology and pathology to reveal the morphological traces of ancient diseases, helping modern researchers to understand the evolution of the illnesses that affect mankind today.

The project will carry out anthropological and radiological examination of the corpses and the studies will include: anthropology, palaeonutrition, histology, histochemistry, immunohistochemistry, electronic microscopy, molecular biology (study of residual DNA) and the identification of ancient pathogen agents.

The research will involve a number of specialist approaches and the diseases diagnosed will be subdivided into two classes. One will include 'actual diseases', defined as important pathological conditions (tumours, tuberculosis, leprosy and some major infectious diseases); the other will group 'minor' pathologies, showing less severe features, but which still afflict the life of the sufferer (arthritis, anaemias and diseases due to deficiencies). The influence of dietary, working, environmental and health conditions on the life of these ancient people will also be directly studied. The target is to obtain data regarding the development of diseases, with particular reference to the causes of death. Tradition has it that many members of the Medici Family were affected by gout, as evidenced by the nick-name of Piero, called 'the Gouty'.

Comparison of the data obtained from the contemporaneous and subsequent populations will make it possible to draw up a dynamic pattern, showing pathogenesis evolution during the Renaissance. This part of the project will be realized by comparing data obtained from palaeopathological studies with those of historical documents. The biomedical study of such a great number of individuals is fundamental to the general enrichment of current knowledge of the environment, way of life and diseases of the Medici Family.

The team consists of a number of experts belonging to the University of Pisa (Prof. G. Fornaciari, Dottoressa A. Vitiello) and to the University of Florence (Prof. D. Lippi, Prof. N. Villari, Dr M.M. D'Elios, Dr A.A. Conti), but other Associations are involved in the Project: the Superintendency of Florentine Monuments (Dottoressa M. Bietti), Opificio delle Pietre Dure, Opera Mediceo Laurenziana. All of their efforts are addressed to carrying out this Project, which offers a unique opportunity to study the health of the Medici and to provide for better conservation of the tombs themselves.

One serious uncertainty for the Medici Project was the flood of 1966 when the River Arno overflowed its banks, inundating the crypt. It was several weeks before the muddy waters drained away and it was impossible to predict what damage might have been caused.

The Project started its work with the tombs of Cosimo I, his wife Eleonora of Toledo and two of their sons, Giovanni and Garcia. Because their tombs are grouped in the first lateral chapel on the right they were easier to screen from the view of the many tourists who visit San Lorenzo.

After raising the marble flooring, the first surprise was a very heavy slab of stone, under a layer of rubble, which required the use of a pulley. Three rectangular chambers lined with bricks and plaster preserved the zinc ossuaries in which anthropologists had reburied the bones in 1947. Eleonora and Cosimo were buried in two different caskets but within the same chamber.

The remains were examined in a field lab set up in a nearby chapel. Although no soft tissue was preserved, the waters of the Arno had not significantly damaged the bones which were, overall, in good condition.

The lives of Cosimo and Eleonora are mirrored in their bones, which show interesting details regarding the numerous pregnancies of Eleonora and the robust skeleton of her husband.

The Medici were also legendary for their astuteness involving intrigue and, on occasion, murder. Official documents state that their two sons, Giovanni and Garcia, died during a trip to the South of Tuscany, where malaria was endemic. Other sources, however, allege that Garcia killed Giovanni and that he was then murdered by Cosimo himself. Examination of their bones offered no evidence of violence.

With Francesco I we move into the darker side of the Medicis, as he is said, together with his second wife Bianca Cappello, to have been poisoned by his brother Ferdinando. After their sudden death, which occurred in their villa in Poggio a Caiano, near Florence, Ferdinando ordered an autopsy to be performed. Documents relate that he forbade the burial of Bianca in the Medici Chapel and she was assumed to have been interred in a common grave.

A recently discovered document has thrown new light on this story. It says that the internal organs of both Francesco and Bianca were buried in clay vessels in a church near the Villa and that the body of Bianca Cappello was buried near the entrance of the Church of San Lorenzo.

An archaeological survey in the Church near Poggio a Caiano has made it possible to recover some interesting elements which are now being studied by Prof. F. Mari and Prof. E. Bertol (University of Florence), in order to discover traces of poison.

This is the only opportunity we have, as the bones of Francesco were completely shaved by the researchers of the past century and the tomb of Bianca has not yet been exhumed.

The tomb of Gian Gastone, the last Medici, presented one of the greatest surprises. After the removal of the usual marble slab with the brass plaque, brick-and-stone masonry appeared which made it impossible to reach the opening of the tomb itself. It was eventually decided to lift a circular grey stone, with the aid of suction cups.

This revealed a layer of sand and another circular stone. Underneath we found stairs leading down to a crypt, whose existence was completely unknown to us.

In the crypt, several coffins lay smashed on the floor – a result of the Arno flooding. Many of these were the coffins of children, but it has so far proved impossible to identify them.

Beneath the lid of the greatest coffin lay Gian Gastone, with his crown and medals, which pious hands placed there 250 years ago.

It was a marvellous surprise and, as a result of these finds, our next months will be spent conserving the artefacts from Gian Gastone's tomb and trying to identify the anonymous children who rest with him in the crypt.

Several dozen more Medici are buried in the chapel and waiting to be studied. We face a very great challenge, but it offers an important opportunity to reconstruct the history of a family, which gave to the world politicians, queens, statesmen and patrons of art and culture.

One final word. It is not inappropriate for the Medici to be the subject of a medical research project. The name 'Medici' evokes the family's origins as doctors or apothecaries and, allegedly, the right to add 'palle' or balls to the coat of arms was granted by Charlemagne to a Medici ancestor claimed to have been his physician. One suggestion is that the balls on the Medici coat-of-arms represent cupping glasses or 'pills' administered to the Emperor.

Prof. Donatella Lippi