Conservation of an Excavated Garment from the Mid-Joseon Dynasty, Korea

Go Eun Jung1, Young Mee Baek2, Young Suk Kwon3
1 Department of Traditional Costume & Conservation Science, Pusan National University, Korea
2 Korean Traditional Costume Research Institute, Pusan National University, Korea
3 Department of Clothing and Textiles, Pusan National University, Korea

INTRODUCTION

In the Joseon dynasty, Korea, the bodies of the nobility were usually covered with lime when buried in their tombs. Though many mummies have been excavated with their garments, the fabrics of the costumes were usually degraded by the bodies and by moisture. In this presentation, we discuss the Korean traditional headdress-Ga-Ri-Ma. The analysis results and conservation method of the excavated textile are reported. Ga-Ri-Ma are simply shaped headdresses for women. They had been found in Korean traditional paintings and literatures up to the late Joseon Dynasty, but little is known about their shapes and how they were worn. In 2010, a Ga-Ri-Ma was excavated with Yeohunge Lee’s mummy in Gyeonggi-do Osan. Because the mummy was found wearing it, it attracted the attentions of many researchers who are studying Korean Traditional costume.

HISTORY AND BACKGROUND

Literature on Ga-Ri-Ma (加里麻)
Ga-Ri-Ma means “covering the forehead”. Yeon-Ryeo-Sil-Gi-Su(飛黎室記述, 1776) wrote: “Ladies in Korea make Ga-Ri-Ma by folding black or purple silk in half and putting a thick paper in-between and wear it on their forehead to cover from head to shoulder”. Oh-Ju-Yeon-Mun-Jang-Jeon-San-Go in (五洲衍文長陵故宮, 1788) which describes the material and shape of Ga-Ri-Ma wrote that Gi-Nyeo who was an entertainer affiliated to the palace during the Joseon Dynasty wore one made of black cotton, while nurses who worked in the palace wore one made of black silk and shaped like a book. Therefore, the materials of a Ga-Ri-Ma are black or purple silk or cotton, and the shapes is maintained by thick square paper inside. Korean paintings and literature indicate that Ga-ri-Ma can be categorized into hard and soft material types.

Who wore Ga-Ri-Ma?

Before the mummy of Yeohunge Lee was found, it was known to be worn by the women with special occupations such as Gi-Nyeo, court nurses and court ladies. They represent their jobs and their social classes. However, the mummy of Yeohunge Lee confirms that ordinary women could wear Ga-Ri-Ma in their daily lives.

RESULTS & DISCUSSION

Textile analysis

The weave construction of the Ga-Ri-Ma fabric is a combination of plain and satin with a flower pattern.

Table 1. Characteristics of fabric

<table>
<thead>
<tr>
<th>Sample</th>
<th>Density (threads/inch)</th>
<th>Density of warp to weft</th>
<th>Thickness of the fiber (㎜)</th>
<th>Thickness of warp to weft (㎜)</th>
<th>Text</th>
<th>Thickness with paper (㎜)</th>
<th>Width (㎝)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 1</td>
<td>104.7</td>
<td>2.2</td>
<td>0.24</td>
<td>0.58</td>
<td>2.0</td>
<td>0.15</td>
<td>31</td>
</tr>
</tbody>
</table>

Material analysis

FTIR

FTIR indicates that the textile (sample 1) is silk, the inner wool (sample 2) is floss silk, and the outer wool pad (sample 3) is cotton.

Dye analysis

HPLC-PDA

Dye analysis by HPLC-PDA shows that the Ga-Ri-Ma was dyed with indigo.

Restoration

Based on the sewing methods and analysis results, the Ga-Ri-Ma was reconstructed, using silk dyed with indigo.

CONCLUSIONS

The material nature of a Ga-Ri-Ma excavated from the mummy of Yeohunge Lee was studied using FTIR, SEM, HPLC-PDA and microscopical examination. The restoration was carried out based on the findings and historical references. This confirmed that ordinary women also wore Ga-Ri-Ma in their daily lives. It revealed that the Ga-Ri-Ma covered the foreheads to the shoulders, and were fixed to plaitsed hair. We found that the fabrics were dyed with indigo, the inner material was silk and outer material was made of cotton wool. This study shows that analysis of the materials, such as dye and fibre identification, and a study of shapes were useful for the reconstruction of the Ga-Ri-Ma.