Conservation of a water colour painting

FRUITS AND FLOWERS

A CASE STUDY

The painting, measuring 53 x 77 cms, was in a very poor condition, object is painted in Gouache technique, seems to be painted by some mural artist. White lead was used a ground on which several layers of paint was applied.

Painting – before conservation

Condition : The condition of the painting was recorded using diagrams and photography. The stereo microscope was used to find the minute problems. On careful examination, the following problems were noticed:

Flaking of pigment	. Blistering of paint layer	Old brown tape repair
Powdering of pigment	Cut and scratches on paint surface	Cockling of paper
Minute surface cracks	Darkened white pigment	

Same painting after conservation

Flaking, blistering and powdering were the major problems on the painting, the slightest touch was damaging the paint surface.

Treatment : The following treatments were decided to be carried out

1. Consolidation
2. Removal of textile backing
3. Relining with Japanese paper, using Japanese technique
4. Relaxing on karibari board
5. Filling of cracks with tissue fibre
6. Retouching with pencil and pastel
7. Floating and deep mount

Consolidation using nebulizer

Details of flaking on the paint layer

Painting attached to the wooden strainer with Japanese tissue strips

Consolidation : Keeping in mind of the paint surface, it was decided to use three consolidation techniques (1) Nebuliser (2) Air brush (3) Brush
About 2% aqueous solution of low viscosity Methyl cellulose was decided to be used for consolidation, before carrying out all consolidation treatment the painting was humidified with Gortex and wet blotter. I took about six to seven sessions to respectively 20 minutes for each session. The

Nebuliser treatment was carried out in the humidity chamber maintaining the RH at 70%. The consolidation with brush was done under a stereo microscope.

Removal of textile backing : The paper was cockled due to the uneven stretching of the textile. It was decided to separate the textile from the paper. Thought the paint layer was consolidated in through, it was decided to carry out all treatments with the paint layer face up. The painting was attached on a wooden strainer with the help of Japanese tissue strips, 2 cm area of all around the edges were opened locally moistening and the water cut tissue strips were pasted with wheat starch paste. The other end of the strip was pasted to a strainer avoiding the wrinkles. The painting was then placed on the easel and steam was used to peel off the textile. The excess glue which was on the back was also removed with a scalpel and cotton swabs. The tears were temporarily repaired with tissue paper to avoid further damage.

Relining of the painting (while on wooden strainer) using Japanese technique

Reversing the blackened pigment : We thought that the white lead, which was probably used for highlight, was blackened after reacting with the atmospheric sulphide. Hydrogen peroxide vapors were used to attempt to reverse the blackened white pigment; this however was not successful. The painting was taken to science department and tested with XRF (X-ray fluorescence spectroscopy).
The reading indicated that all over the painting the presence of lead over all the painting; since we did not get the result in Hydrogen peroxide, it was decided to leave the problems for the time being.

Relining : As I mentioned earlier, the decision of carrying all treatments keeping face up, it was decided to line the object while it was on the strainer. Japanese lining techniques were used to line the painting, before lining the painting was humidified with Gortex and wet blotter. The lining paper was larger than painting size, about a strainer's size, along with the object the lining paper was pasted to the strainer and the temporary strips, which was used to hold the object on strainer was removed one by one without damaging the lining paper. The painting was left on strainer over night to dry; the next day it was taken off from the strainer and relaxed on karibari board to flatten the object.

Filling the gap : The gap at the top, about 5 inch length and 0.5 mm width was filled with tengujo using wheat starch paste, three layers were applied and the final layer was burnished and coated with Methyl cellulose. The pencil and pastel were used to retouch the filled area.

Mounting : It was decided to put the water colour in to a deep mount. The object was floated on to an acid free paper. Special care was taken to avoid the damage at the corners.