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Traditional Embalming and Mortuary Care among the Ijaw (Izon) of the Niger Delta: An Anatomical Ethnography

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ABSTRACT

Indigenous corpse preservation methods are a significant part of human anatomical heritage. Among the Ijaw (Izon) people of the Niger Delta, traditional embalming techniques predate Western mortuary science. This research documents the materials, methods, and cultural meanings linked to traditional body preservation in Ijaw communities across Bayelsa, Delta, and Rivers States, highlighting their anatomical importance. Using a qualitative ethnographic approach, the study involved 27 participants, including elders, traditional practitioners, mortuary workers, and cultural custodians. Data collection included interviews, participant observation, and field notes, analysed thematically. Results indicate that Ijaw embalming mainly uses plant-based substances, palm kernel oil, and native gin. These practices demonstrate a practical understanding of human anatomy, tissue fragility, and microbial control. Beyond biological aspects, they are deeply rooted in spiritual beliefs and social duties. The study concludes that Ijaw embalming reflects a localized anatomical knowledge system, deserving documentation, preservation, and scientific assessment for its relevance to modern anatomy, mortuary science, and cultural heritage.

1. Introduction

Embalming involves preserving dead bodies from decay using antiseptic agents and traditional methods (1). It also entails treating the body to reduce micro-organisms, slow decomposition, and restore a suitable appearance (2). Throughout history, the preservation of human remains has been vital to the development of anatomical science across various cultures. Ancient civilisations like Egypt, Ethiopia, and parts of Asia developed advanced embalming techniques that inadvertently enhanced their understanding of human anatomy (3). In African cosmology, death, burial, and body preservation symbolise the ongoing link between the living and ancestors (4). In Nigeria, indigenous communities have developed diverse methods to delay decomposition for ceremonial or spiritual reasons, yet these practices have received little scholarly attention despite their importance in understanding local health systems and early anatomical knowledge (5).

Research across southern Nigeria shows that corpse preservation serves both practical and symbolic purposes (6). Practically, it prevents rapid decay and odour, enabling dispersed family members to gather for elaborate funerals. Symbolically, it demonstrates respect for the dead, social standing, and belief in transitioning to ancestorhood (7). Studies among ethnic groups like the Igbo in Southeastern Nigeria report that traditional corpse-preservation methods still exist in some communities, often involving herbal treatments, smoke-drying, and oils to delay decomposition (8). However, scholarly focus on the Niger Delta region or the Ijaw (Izon) people remains limited.

The Ijaw (Izon) people, inhabiting coastal and riverine areas across Delta, Bayelsa, Rivers, Edo, Ondo, and parts of Akwa Ibom States, have a rich history of ritual burial and preservation practices (9,10). These rituals serve not only to delay decomposition until burial but also hold cultural and spiritual significance related to ancestor veneration, lineage pride, and community identity (11).

Considering the ethnic diversity and wide geographical distribution of the Ijaw, there is strong justification for systematically documenting their mortuary practices. This study aims to:

- Document traditional Ijaw methods of corpse preservation, including materials and procedures.
- Explore the anatomical principles behind these practices.
- Investigate the cultural importance and current changes in traditional embalming.
- Highlight the role of these indigenous techniques in advancing anatomical knowledge.

2. Materials and Methods

2.1 Research design

A qualitative ethnographic approach was employed to investigate traditional Ijaw embalming practices within their natural settings. This approach facilitated detailed observation of rituals, materials, and anatomical procedures.

2.2 Study area

The research was carried out in Ijaw communities across Bayelsa (Sagbama, Ogbia), Delta (Patani, Kpakiama), and Rivers (Andoni, Bonny) States to represent the central, western, and eastern dialect zones of the Ijaw ethnicity. These locations were chosen because they preserve varying levels of traditional embalming knowledge despite the existence of modern mortuaries.

2.3 Study population

The participants included traditional custodians and herbalists (n=8), community elders and family heads (n=10), mortuary attendants/coffin-makers (n=5), and cultural historians or clergy (n=4), total n = 27. Participants were recruited purposively and through snowball sampling, starting with local community leaders.

2.4 Data collection

Methods included: in-depth semi-structured interviews, participant observation of non-invasive mortuary activities, key informant sessions with senior practitioners, and field documentation of herbs, oils, salts, and tools used.

2.5 Ethical considerations

Ethical clearance was obtained from the institutional review board of Southern Delta University, Ozoro. Verbal informed consent was obtained from all participants. The research respected cultural taboos; no human tissue was removed or manipulated outside traditional practices.

2.6 Data analysis

All interviews were transcribed word-for-word and translated into English where necessary. The transcripts were read several times to ensure familiarity with the content. A manual thematic analysis was then conducted. During this process, key statements were highlighted and assigned descriptive labels, which were gradually organised into broader categories. These categories later developed into recurring themes such as: (1) materials used for body preservation, (2) procedural steps, (3) implicit anatomical reasoning, and (4) cultural and spiritual meanings of embalming. Field observations were used to corroborate the interview data, and areas of agreement across different participants were given particular attention. This triangulation strengthened the credibility and trustworthiness of the findings.

3. Results and Discussion

The study documented various traditional body-preservation practices among Ijaw communities in Bayelsa, Delta, and Rivers States. While procedures slightly differed among dialect groups (Western, Central, Eastern Ijaw), several core themes were consistent: (1) using plant-based substances and oils; (2) applying alcohol and local salts; (3) desiccation through controlled smoking or heat; (4) ritual techniques link to anatomical manipulation; and (5) changing practices due to modernization and Christianization.

The findings highlight a well-structured indigenous knowledge system and blends cultural significance with practical anatomical insight.

3.1 Materials Used for Traditional Preservation

- Herbal and Aromatic Plants

In all surveyed communities, medicinal plants with strong aromatic or antimicrobial properties were most frequently mentioned. Common examples included: Ocimum gratissimum (scent leaf), Allium sativum (garlic), Xylopia aethiopica, Bitter leaf extract, Bark powders from local mangrove species

These materials were crushed or soaked in gin to create concentrated pastes that were applied to the abdomen, armpits, genitals, neck, and sometimes inserted into body orifices.

Interpretation: This indicates an intuitive grasp of microbial control, as many of these plants contain essential oils with proven antibacterial properties.

- Oils and Fats

Palm kernel oil was the most common emollient used. In some communities (Sagbama, Kpakiama, and Bonny), red palm oil mixed with camwood (Baphia nitida) powder or charcoal powder served as a surface sealant.

Interpretation: Oils functioned as desiccants and created hydrophobic barriers, reducing surface moisture and thereby slowing autolysis and bacterial growth.

- Alcohol and Indigenous Salts

Native gin (ogogoro, kaikai) served both as a cleaning agent and as a preservative. In some riverine communities, locally harvested salts were rubbed into some body areas.

Interpretation: Alcohol and salts have long been used in preservation for dehydrating and antimicrobial properties.

3.2 Technical Procedures and Anatomical Practices

- Washing and Dressing

The preservation process started with washing the body mainly with river water (pou beni), then placing the body on plantain leaves called berebe fun gotten from back of the house. This was swiftly followed by ‘mouth-spraying’ with locally made gin, ‘kai-kai’. Some embalmers believe that ‘mouth-spraying’ prevents decay associated with rubbing gin directly on the body. After spraying, Kai-kai was introduced through the mouth, and cotton wool is used to close the nostrils and mouth to prevent air entry. Notably, the body would not be kept for more than three days.

Anatomical relevance: Early cleansing likely helped remove surface bacteria and bodily fluids, delaying putrefaction.

- Washing and Powdering Method:

Most Ijaw groups practiced grounding Camwood (esele) into powder. This substance was believed to have preservative qualities, helping extend the body's preservation and prevent decay. The process continued until the body was dried.

- Incisions and Fluid Removal

While other ethnic groups engaged in incision of the dead, this is rare among the Ijaw, who consider the deceased sacred. Nevertheless, experienced practitioners made small incisions in the abdomen or chest to drain putrefactive fluids, especially if the body was to be kept for several days before burial. This reflects an understanding of internal fluid buildup and how gases contribute to post-mortem swelling.

- Smoking and Drying

In fishing communities, smoking the body over gentle heat was a common preservative method. The body was placed near a hearth for 12–48 hours, depending on circumstances. This practice was not observed in studied communities but was reported in others. It demonstrates a parallel with ancient and modern preservation techniques such as Egyptian desiccation, Andean drying, and freeze-drying in pathology.

- Massage and Preservatives Application

Herbal pastes and oils were massaged into specific body regions: joints, abdomen, facial structures, perineum. These sites are areas of rapid decomposition, showing practitioner awareness of anatomical vulnerability.

3.3 Cultural and Symbolic Dimensions

- Spiritual Integrity of the Body

The Ijaw believe proper preservation ensures safe transition to the ancestors. Poor preservation is linked to spiritual unrest and dishonor. Preservation thus has both physical and spiritual significance.

- Social Obligations

In many communities, bodies were kept longer to wait for relatives from afar or to prepare for elaborate burials. This practice responded to social needs, similar to how Egyptian embalming aimed to preserve high-status individuals for ceremonial rites.

- Changing Practices

Participants noted a decline in traditional methods due to the rise of modern mortuaries, Christian restrictions on "pagan rites", urbanization and loss of traditional knowledge.

Despite this, some practices still survive, mainly in rural riverine settlements.

3.4 Anatomical Insights from Traditional Practice

Research shows that Ijaw traditional embalmers have an inmate yet precise understanding of tissue decomposition patterns, bodily fluid behaviour, antimicrobial substances, weak points in body structure, and preservation requirements for visual integrity.

These insights align with historical developments of anatomy globally, where ritual embalmers and morticians initially guarded internal body knowledge. Therefore, Ijaw traditional embalming forms a localized anatomical tradition predating modern mortuary science, offering valuable insights for contemporary anatomical education and ethnomedicine.

3.5 Implications for Modern Anatomy and Biomedical Science

- Potential for Eco-friendly Preservatives: Many herbs identified in this study contain natural phenolics, flavonoids, and essential oils with antimicrobial properties. They could serve as bio-preservative or formalin alternatives, especially in teaching laboratories seeking less toxic options.
- Culturally Sensitive Mortuary Practices: Understanding indigenous beliefs can enhance mortuary care in hospitals serving Ijaw communities. Aligning procedures with traditional expectations.
- Ethno-Anatomy as a Research Frontier: Documenting indigenous anatomical knowledge adds to the global record of human preservation methods, alongside Egyptian, Ethiopian, and Bini practices.

3.6 Implications for Anatomy and Modern Mortuary Science

The findings indicate that traditional Ijaw embalming provides a valuable, yet often overlooked, source of anatomical knowledge and practical mortuary science. First, some of the herbs and oils used may contain bioactive compounds with antimicrobial or tissue-preserving properties. Scientific evaluation of these substances could yield low-toxicity, eco-friendly alternatives to formaldehyde-based embalming fluids; an issue of interest given environmental and health concerns associated with formalin.

Additionally, integrating this ethno-anatomical knowledge into anatomy curricula or mortuary-science training particularly in Nigeria and West Africa can enhance cultural awareness, respect for local traditions, and broaden understanding of body-preservation beyond Western-centric paradigms.

Furthermore, documenting these practices helps preserve intangible cultural heritage, and fosters connections between anthropology, anatomy, and heritage studies within Nigeria and across Africa.

4. Conclusion

The traditional corpse-preservation methods of the Ijaw showcase a complex indigenous anatomical system. By using herbs, oils, alcohol, salts, and smoking, practitioners successfully delayed decomposition and prepared bodies for intricate funerary rites. These methods serve both practical and spiritual motivations underscoring the cultural importance of body integrity, dignity, and ancestral continuity. As modern mortuary science expands, urgent efforts are needed to document, study, and preserve such indigenous knowledge both for its heritage value and its potential contributions to modern anatomical and mortuary practice.

5. Recommendations

- Document and archive traditional embalming knowledge before it disappears due to urbanization, migration, and decline in traditional practitioners.
- Conduct biochemical and microbiological analyses of the herbs, oils, and salts used in traditional embalming to evaluate their preservative/antimicrobial properties.
- Integrate ethno-anatomical perspectives into anatomy and mortuary-science curricula in Nigerian institutions.
- Develop culturally sensitive mortuary policies that recognize and respect indigenous practices where they do not conflict with public health standards.
- Expand comparative research to include other Niger Delta and West African ethnic groups to understand regional variation in traditional corpse-preservation techniques.

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