

Impact of nursing checklist management on treatment timeliness and neurological function recovery in patients undergoing interventional surgery for acute ischemic stroke

Submission date 21/01/2026	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 21/01/2026	Overall study status Completed	☐ Statistical analysis plan ☐ Results
Last Edited 21/01/2026	Condition category Circulatory System	☐ Individual participant data ☒ Record updated in last year

Plain English summary of protocol

Background and study aims

Current research on the application of checklist management in nursing for Acute Ischemic Stroke interventional surgery is limited both domestically and internationally, with most studies being observational or involving small samples, and lacking high-quality randomized controlled trial evidence. This study aims to construct a nursing checklist suitable for AIS interventional surgery through a rigorous randomized controlled trial design and to verify its application effect.

Who can participate?

Patients who underwent interventional therapy for acute ischemic stroke aged 18-90 years

What does the study involve?

This study employs a prospective randomized controlled trial design to construct and verify the application effect of a standardized nursing checklist in Acute Ischemic Stroke interventional surgery, evaluate its impact on treatment timeliness and neurological function recovery, and provide evidence-based support for establishing a standardized Acute Ischemic Stroke interventional nursing model.

What are the possible benefits and risks of participating?

The application of nursing checklist management in interventional surgery for acute ischemic stroke may shorten the treatment time, significantly promote the recovery of neurological function, and reduce the risk of complications.

There is no risk in participating in this study.

Where is the study run from?

The Central Hospital of Xiangtan (China)

When is the study starting and how long is it expected to run for?

From January 2024 to March 2025

Who is funding the study?

Hunan Provincial Health Commission National Key Clinical Specialty Major Project, Project Number: Z2023138;

Xiangtan City Medical Research Project, Project Number: 2023-xyx-23;

Hunan Provincial Natural Science Foundation Project, Project Number: 2024JJ9561;

Chinese Nursing Association Project, Project Number: ZHKY202406;

Hunan Provincial Health Commission Project, Project Number: 202114010862;

Hunan Provincial People's Hospital Medical Alliance Project, Project Number: 2023YLT002

Who is the main contact?

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Contact information

Type(s)

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Additional identifiers

Study information

Scientific Title

A quantitative study on the impact of nursing checklist management on treatment timeliness and neurological function recovery in patients undergoing interventional surgery for acute ischemic stroke

Study objectives

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 04/06/2024, Ethics Committee of The Central Hospital of Xiangtan (No. 120, Heping Road, Yuhu District, Xiangtan, 411100, China; +86 731 58214988; xtchllwyh@163.com), ref: 2024-06-002

Primary study design

Interventional

Allocation

Randomized controlled trial

Masking

Blinded (masking used)

Control

Active

Assignment

Single

Purpose

Supportive care

Study type(s)**Health condition(s) or problem(s) studied**

Treatment timeliness and neurological function recovery in patients undergoing interventional surgery for acute ischemic stroke

Interventions

A computer-generated random number table method is used to randomly assign patients to the observation group and control group.

1. Intervention Methods for the Observation Group

Assemble an expert team to develop a Nursing Checklist for Interventional Procedures in Acute Ischemic Stroke.

The observation group is managed using an interventional surgery checklist based on the standardized routine nursing model.

The nursing checklist for interventional surgery for acute ischemic stroke includes 7 dimensions: preoperative assessment, preoperative preparation, intraoperative monitoring, intraoperative cooperation, postoperative management, transfer and handover, and disposal and disinfection 7, with a total of 27 items, distributed in 3 stages: preoperative, intraoperative, and postoperative 3. Among them, preoperative assessment 6 items; preoperative preparation 4 items; intraoperative monitoring 2 items; intraoperative cooperation 6 items; postoperative management 4 items; transfer and handover 2 items; disposal and disinfection 3 items.

2. Control Group Intervention Protocol

The control group received routine care according to the "Perioperative Nursing Expert Consensus for Endovascular Interventional Therapy in Patients with Acute Ischemic Stroke". This included nurses collaborating with physicians to complete initial assessment and management of the patient's condition after admission, completing various preoperative examinations, as well as routine preparation, cooperation, and nursing for the surgery, and postoperative monitoring of vital signs and observation for complications, but without the use of structured checklist tools.

Intervention Type

Other

Primary outcome(s)

1. neurological function recovery measured using modified Rankin Scale (mRS) at discharge, 90 days after discharge
2. The stroke team response time measured using time from patient arrival at the emergency department to stroke team arrival (min) at When the stroke team arrive at the emergency department
3. Computed Tomography completion time measured using time from patient arrival at the emergency department to CT examination completion (min) at When the CT examination is completed
4. Door-to-Puncture Time measured using time from patient arrival at the hospital to arterial puncture time (min) at when the patient completes arterial puncture

Key secondary outcome(s)**Completion date**

28/03/2025

Eligibility**Key inclusion criteria**

1. Aged 18-90 years
2. Time from onset to consultation ≤ 24 hours
3. Diagnosed with acute ischemic stroke by clinical symptoms, signs, and imaging examinations such as head CT and MRI
4. National Institutes of Health Stroke Scale (NIHSS) score ≥ 6 points
5. Imaging confirms large vessel occlusion
6. Signed informed consent

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

18 Years

Upper age limit

90 Years

Sex

All

Total final enrolment

Key exclusion criteria

1. Concomitant severe heart, liver, or kidney dysfunction (NYHA class IV heart function, Child-Pugh class C liver function, chronic kidney disease 5)
2. Advanced malignant tumor
3. MMSE score<24 points
4. Severe residual deficits from previous stroke (mRS>3points)
5. Pregnancy or lactation
6. Participation in other clinical trials

Date of first enrolment

08/01/2024

Date of final enrolment

25/10/2024

Locations**Countries of recruitment**

China

Sponsor information**Organisation**

The Central Hospital of Xiangtan

Funder(s)**Funder type****Funder Name**

Hunan Provincial Health Commission National Key Clinical Specialty Major Project

Funder Name

Xiangtan City Medical Research Project

Funder Name

Hunan Provincial Natural Science Foundation Project

Funder Name

Chinese Nursing Association Project

Funder Name

Hunan Provincial Health Commission Project

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Hunan Provincial People's Hospital Medical Alliance Project

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available