

Comparative analysis of adult-onset Still's disease (AOSD) treatments

Submission date 12/12/2023	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 14/12/2023	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 14/12/2023	Condition category Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Adult-onset Still's disease (AOSD) is a rare autoinflammatory disorder with increased mortality. Complications such as macrophage activation syndrome in continuously active disease carry a high mortality risk. Glucocorticoids (GC) and conventional disease-modifying antirheumatic drugs (DMARDs) are commonly used as first-line therapeutic options as opposed to recently licensed interleukin-1 (IL1)-receptor antagonist anakinra (ANA), neutralizing IL1b-antibody canakinumab (CAN), or non-licensed use of IL-6 receptor antibody tocilizumab (TCZ). However, DMARDs have a considerably slower onset, and GC may result in substantial side-effects such as diabetes mellitus or osteonecrosis of the hips. Our study evaluates potential benefits of biologicals (ANA, CAN, TCZ) as first-line therapeutic options in AOSD.

Who can participate?

Data from AOSD-patients (disease onset) fulfilling the Yamaguchi classification criteria, over 18 years, female/male or divers of the last 15 years of participating centers are included in the study.

What does the study involve?

We plan to retrospectively analyze data from German rheumatology centers (last 15 years), examining both the effectiveness of therapy (percentage of patients in remission) and side effects of different therapies.

What are the possible benefits and risks of participating?

Participating in this study offers the benefit of contributing valuable data to guide treatment decisions for AOSD patients, including insights into treatment responses and potential complications under various treatment options.

Where is the study run from?

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

January 2023 to January 2024

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
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Contact information

Type(s)

Principal investigator

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Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

Nil known

Study information

Scientific Title

Comparison of different treatments in adult-onset Still's disease (AOSD): biologics, glucocorticoids, and conventional disease-modifying antirheumatic drugs (DMARDs)

Acronym

TAST

Study objectives

Complication free remission rates are lower in patients initially treated with biological therapy as opposed to DMARD therapy

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 13/09/2023, Ethics Committee of the medical faculty of the University of Duesseldorf (Moorenstr. 5, Düsseldorf, 40225, Germany; +49 211 81-19591; ethikkommission@med.uni-duesseldorf.de), ref: 2023-2423

Study design

Retrospective chart review of AOSD patients from multiple German centers

Primary study design

Observational

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Treatments of Adult-onset Still's Disease (AOSD, rheumatic disease)

Interventions

Retrospective Observational study

Data collected:

- Epidemiological data (age at onset, sex, height, weight, comorbidities)
- Disease activity data (items of the Pouchot Score, CRP, Ferritin, Leukocyte count, alternatively the EULAR-DAVID score if available in the meantime)
- Physician subjective evaluation of "remission" based on chart review
- fever yes/no
- arthritis yes/no
- ASOD-associated rash yes/no
- Treatment
- Complication of GC use:
Diabetes necessitating insulin therapy Gain in body weight ($\geq 10\%$) Osteonecrosis of any joint

Psychosis or other psychiatric disease requiring psychopharmacological intervention

Hypertension

Dyslipidemia requiring therapy with e.g. statins

Worsening of bone density > 0,5 SD (T1-4, neck or total hip)

Clinical diagnosis of steroid myopathy Skin disease attributed to GC

Eye disease attributable to

- Serious infection necessitating intravenous antibiotic use

- Death

- Macrophage activation syndrome

- AOSD-associated pneumonitis

- ASOD-associated perimyocarditis

- Ongoing disease activity requiring switch from DMARD-based to biological therapy

Intervention Type

Other

Primary outcome(s)

Sustained remission (definition see below) at week 12 and complication free until week 72 (definition see below).

For remission, all of the below must be fulfilled:

1. Physician subjective evaluation of "remission" based on chart review
2. CRP below 10 mg/l
3. No fever during last week
4. No arthritis during last week
5. No ASOD-associated rash during last week

For Complication-free (none of the following should have been appeared):

1. Complications of GC use
2. Diabetes necessitating insulin therapy
3. Gain in body weight ($\geq 10\%$)
4. Osteonecrosis of any joint
5. Psychosis or other psychiatric disease requiring psychopharmacological intervention
6. Hypertension > 180 mmHg systolic pressure resulting in change of antihypertensive medication
7. Dyslipidemia requiring therapy with e.g. statins
8. Worsening of bone density > 0,5 SD (T1-4, neck or total hip), preexisting osteoporosis or osteoporosis diagnosed within 2 months of disease onset is not considered to be a GC-related event
9. Clinical diagnosis of steroid myopathy
10. Skin disease attributed to GC, e.g. striae, cutaneous necrosis, relevant subcutaneous bleeding or ulcerations
11. Eye disease attributable to GC (esp. cataract, glaucoma)
12. Serious infection necessitating intravenous antibiotic use
13. Death
14. Development of macrophage activation syndrome, AOSD-associated pneumonitis, ASOD-associated peri myocarditis
15. Ongoing disease activity requiring switch from DMARD-based to biological therapy

Key secondary outcome(s)

1. Flare-free survival in patients under remission
2. Rate of remission (definition see below) by week 12 and complication free by week 72
3. Retrospective analysis of differences in the glucocorticoid toxicity index (GTI)
4. GC dose reduction (at week 12 and week 72)
5. GC dose reduction by at least 75% compared to disease onset
6. Time to remission
7. Time to complication (definition see above)
8. Complications (definition see above)

Completion date

31/01/2024

Eligibility

Key inclusion criteria

1. Yamaguchi classification criteria are met
2. Documented clinical visits at onset/flare, by week 12 and week 72

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

Not matching the inclusion criteria

Date of first enrolment

15/09/2008

Date of final enrolment

31/01/2024

Locations

Countries of recruitment

Germany

Study participating centre

Rheinisches Rheuma-Zentrum St. Elisabeth-Hospital Meerbusch

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Study participating centre

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Sponsor information

Organisation
St. Elisabeth-Hospital Meerbusch-Lank

Funder(s)

Funder type

Other

Funder Name

Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

The raw data supporting the conclusions will be made available by the authors on reasonable request.

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IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes