Fast track GCA
MSE Teaching Hospitals
Group
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Mid & South Essex Teaching Hospitals
STP Clinical Cabinet 19 September 2019
Case Study

Southend University Hospital NHS Trust
Preventing blindness by fast-tracking suspected Giant Cell Arteritis patients to immediate treatment

Outstanding Best Practice Award 2016
Reduction of sight loss in GCA

• The challenge
• The solution
• Evidence of improved outcomes (clinical, patient experience, financial)
• Next steps
How do we reduce sight loss & ischemic complications in GCA?

Fast track pathway : ACT-FAST GCA
Blood supply of the Optic Nerve
A case history
75 year old lady
Flourescein angiogram showing choroidal ischemia in GCA.
ACT-FAST GCA

• Permanent vision impairment is seen in 15-25% of GCA many of whom have bilateral involvement.
• Irreversible ischemic complications such as vision loss occur early, prior to steroid therapy
• This is preventable with steroid therapy
• Need fast-track treatment analogous to stroke for GCA with ischemia
Rationale for Fast track GCA pathway

- ‘Time is Brain' ACT-FAST campaign in stroke,
- ‘Time is Sight' in GCA.
- Urgent recognition and prompt GC therapy

- Major delays from symptom onset to diagnosis,
- With high incidence of visual loss.

Key features to help
Early recognition

- Constitutional symptoms plus
- Abrupt new headache
- Scalp pain and tenderness
- Jaw claudication
- Polymyalgia
- Visual symptoms
- Temporal artery abnormalities
- Raised ESR/CRP
GCA can occur without headache

- 78 yr old lady
- Constitutional Sx
- 6 months
- Polymyalgia 3 mths
- Jaw /tongue pain 1 month
- Vision loss R eye
- 3 days
- CRP elevated

- O/E Tongue necrosis
- ‘Halo sign’ +
- TA biopsy +
- R eye AION
## Delay in GCA diagnosis: Audit results

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<th>% Yes</th>
<th>Duration in days</th>
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<td>11</td>
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<td>13</td>
<td>40</td>
<td>28 (2-84)</td>
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<tr>
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<td>31</td>
<td>30</td>
<td>47</td>
<td>32 (7-84)</td>
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<td>Visual symptoms</td>
<td>23</td>
<td>32</td>
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<td>17 (3-56)</td>
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<td>19</td>
<td>42</td>
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<td>B/L in 8</td>
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<td>21</td>
<td>32</td>
<td>32</td>
<td>38(14-112)</td>
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<td>TIA</td>
<td>5</td>
<td>43</td>
<td>7.7</td>
<td>56(7-140)</td>
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<td>Polymyalgia</td>
<td>18</td>
<td>39</td>
<td>28</td>
<td>58(7-140)</td>
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<table>
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<td>Diagnosis to initial steroid</td>
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<tr>
<td>Symptom onset to initial steroid</td>
<td>36</td>
<td>2-337</td>
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<tr>
<td>Diagnosis to biopsy</td>
<td>6</td>
<td>0-23</td>
</tr>
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</table>

Outcomes of acute sight loss in GCA

- Loss of independence
- Loss of confidence
- Depression
- Loss of mobility
- Residential care
- Medical complications such as hip fractures, infections
- Impact on family
What is to be done?

• ‘Stroke in the eye’ – ACT-FAST GCA
• Need a campaign analogous to ACT-FAST for stroke?
• ‘Time is Sight’ instead of ‘Time is Brain’
• “Symptom to steroid time’ as a performance marker
• Should sight loss in GCA be classified as a SI?
Obstacles to early recognition

- Delayed presentation especially very elderly patients
- Lack of awareness of ischemic symptoms

Delayed referral
- Failure to recognize symptoms/urgency
- Failure to recognize non-headache ocular ischemia

Delayed therapy
- Multiplicity presentations
- Multiplicity of referral routes
21 March 2012

Dear Colleague

Re: - Reducing blindness caused by Giant Cell Arteritis / Temporal Arteritis.

This letter is to inform you of a new Service which is being set up in Southend Hospital for patients with suspected Giant Cell Arteritis (GCA) / Temporal Arteritis.

We are enclosing the new pathway.

- If you suspect GCA start Prednisolone 60 mg a day (if no contraindications). Also ensure patient is on a Proton Pump Inhibitor and bone protection while they are on Prednisolone.

- If it is Monday to Friday (9am to 5pm) then:
  - If patient has eye symptoms - admit to the Ophthalmology on call.
  - If no eye symptoms - ring Southend Hospital on 01702 435555 and ask to speak to the GCA Doctor on call in Rheumatology who will advise you where and when to send the patient.

- If it is outside of Monday to Friday (9am to 5pm):
  - If patient has eye symptoms – send straight away to A&E department.
  - If no eye symptoms - fax a referral to Rheumatology Department, Southend Hospital on 01702 385909 and the patient will be seen within one working day.

This should hopefully enable patients who develop GCA to receive treatment with corticosteroids at an earlier stage and thus reduce the number of people who develop visual loss.

Yours faithfully

[Signature]

Professor Dasgupta
Consultant Rheumatologist
Southend Hospital

Dr Sunil Gupta
PEC Chair
NHS South East Essex
Some Symptoms of Giant Cell Arteritis (GCA) – Patients > 50 years of age

- Headache – usually towards the sides of the head.
- Tenderness of the scalp over the temporal arteries.
- Pain in the jaw and tongue muscles (jaw claudication) while eating or talking.
- Visual disturbances: A feeling of a shade covering one eye, or double vision which can progress to total blindness. If untreated, the second eye is likely to become affected within 1-2 weeks, although it can be affected within 24 hours. Urgent treatment is therefore essential. A temporary loss of vision in one eye, or diplopia may occur before any permanent visual loss.

- Some general symptoms – tiredness, depression, night sweats, fever, loss of appetite, and weight loss.
- Polymyalgia Rheumatica is often also present.

**Possible Examination Findings of GCA**

- Abnormal superficial temporal artery; tender, thickenened or beaded with reduced or absent pulsation.
- Scalp tenderness.
- Transient or permanent reduction in visual acuity (partial or complete).
- Visual field defect.

**Consider the Differential Diagnosis of GCA**

- Herpes Zoster.
- Migraine.
- Serious intracranial pathology.
- Transient Ischaemic Attack.
- Cluster headache.
- Cervical spondylosis.
- Other upper cervical spine disease.
- Sinus disease.
- Temporo-mandibular joint pain.
- Ear problem.

**If GCA Suspected**

If Monday to Friday 9am to 5pm
Start Prednisolone 60 mg daily
GP to ring Southend Hospital on 01702 435555 and ask to speak to GCA Doctor on call who will advise GP where and when to send patient.

If GCA suspected and no visual disturbances nor jaw or tongue pain:
Start Prednisolone 40mg a day (if no contraindications) and fax a referral to Rheumatology Department, Southend Hospital on 01702 385909 and patient will be seen within one working day.
Patient Hazel says fast treatment is vital

“Doctors told me it was a virus and to ride it out, but it got worse. I thought I was going to die. The lack of blood flow to my organs meant they were slowing shutting down. If the symptoms are recognised early and treatment started, you don’t get as bad as I did.”

Mrs Roche, who has giant cell arteritis and large vessel vasculitis, disease, was unable to walk due to severe leg pain, and struggled to eat, so lost two stone in weight. She suffered blinding headaches and a scalp so painful it hurt to brush her hair.

The treatment after so much pain and worry was like a magic bullet.

Quick GP referrals halt blindness

Patients are receiving rapid diagnosis and treatment of an inflammatory condition, which, if left untreated, can lead to blindness.

A new system of quick referral from GP straight to a centre is helping doctors reduce the number of patients at risk of going blind.

Dr Sushil Dasgupta, consultant Rheumatologist at Southend University Hospital, said the new system was proving effective. He said: “The swift treatment has transformed many patients’ lives already. The time from start of symptoms to diagnosis has been reduced considerably.”

However, there is still progress to be made in terms of educating patients to see their GP earlier if they have suspicious symptoms.”

The project is led by Professor Dasgupta. He has had a lifelong interest in giant cell arteritis and developed the British Society of Rheumatology guidelines on the condition, followed by NHS England.

The project in Southend plays a lead role in management and research of the condition and is part of the international programme that Professor Dasgupta leads in 25 centres across the world.

The project in Southend is due to be launched in other parts of the country, said.”
Polymyalgia Rheumatica (PMR) and Giant Cell Arteritis (GCA) are linked rheumatic conditions that have been little known by the public and little understood in medicine. They can strike separately, but often together, and usually affect older people. They cause severe pain and discomfort and the only known effective treatment is long-term use of corticosteroids.

Polymyalgia Rheumatica & Giant Cell Arteritis UK (PMRGCAuk) is a registered charity established to meet the needs of people with these debilitating conditions, their friends, families and helping professionals.

Now you can join a forum to share your questions and experiences with people who have (or have recovered from) PMR and GCA. Click here to take a look!
BSR and BHPR guidelines for the management of giant cell arteritis

Bhaskar Dasgupta¹, Frances A. Borg¹, Nada Hassan¹, Leslie Alexander¹, Kevin Barraclough², Brian Bourke³, Joan Fulcher⁴, Jane Hollywood¹, Andrew Hutchings⁵, Pat James⁴, Valerie Kyle⁶, Jennifer Nott⁷, Michael Power⁸ and Ash Samanta⁹ on behalf of the BSR and BHPR Standards, Guidelines and Audit Working Group

Key words: Guidelines, Giant cell arteritis, Temporal arteritis, Vasculitis Diagnosis, Management, Temporal artery biopsy, Glucocorticosteroids.

Executive summary

The guidelines
GCA is an emergency, GP education and public awareness strategies to recognize GCA early

• GCA is an emergency because of an increased risk of ischemic vascular complications such as blindness.
• Fast-track strategies should be implemented for an early diagnosis and therapy of GCA.
• Education of primary and secondary care professionals
• as well as public awareness enable earlier recognition of GCA symptoms reducing the ‘symptom to diagnosis and treatment’ lag
Service Performance and Outcomes

• On introduction of the FTP, the proportion of patients suffering from **sight loss dropped significantly from 37% to 9%** when compared with the conventional pathway.¹

• A reduction in the time from referral to rheumatology review was likely a major driving force behind the improved clinical outcomes observed, with **79% of patients ultimately diagnosed with GCA seen within one working day.¹**

• Patients referred using the FTP were diagnosed 2–3 days sooner than those in the conventional pathway, limiting exposure to precautionary high-dose steroids associated with debilitating side-effects.¹

Financial Performance and Outcomes

- Implementation of the FTP was associated with cost-savings to the Trust, with a reduction in the average overall cost of diagnosing and treating a patient with suspected GCA from £2.6k to £2.2k per patient.

- In a cost-effectiveness analysis to compare the FTP with the conventional pathway, patients gained on average 2.6 quality-adjusted life years (QALYs) by avoiding the complication of sight loss.

- The economic evaluation determined that the FTP dominated the conventional pathway (−£840 per QALY).
Patient Focus and Satisfaction

- The FTP aims to ensure improved public and professional awareness of GCA, conduct rapid specialist reviews and initiation of treatments, with the aim to improve patient care by preventing visual loss and unnecessary exposure to potential harmful treatment.

- Clearly defined referral pathways and well-coordinated teams ensure that care is patient-centred.

- Demonstrable close links with patient groups and uniform backing from for the FTP.

- Improved recruitment to GCA-related trials including GIACTA and SIRRESTA.

- Public education initiatives to improve awareness including through PMRGCAuk, Fight for Sight and ARMA.
Commissioning Implications

• **Secondary prevention** (King’s Fund 2013 Commissioning Priority¹) – the FTP demonstrates a significant improvement in the number of patients who suffer sight-loss as a result of an avoidable complication of GCA.

• **Care co-ordination through integrated health and social care teams** (King’s Fund 2013 Commissioning Priority¹) – improved communications between primary and secondary care ensure patients are referred quickly and appropriately.

• **Effective medicines management** (King’s Fund 2013 Commissioning Priority¹) – through timely referral and diagnosis, patients avoid unnecessary side-effects of high-dose steroids.

• **Managing urgent and emergency activity** (King’s Fund 2013 Commissioning Priority¹) – through working closely with GPs and committing to advancing the education around GCA, referrals into secondary care are more streamlined and appropriate. Furthermore, the FTP allows early diagnosis of serious non GCA pathology that may mimic GCA

• **GIRFT Getting it right the first time**

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Service Pathway

- The FTP is focused on primary care and Accident & Emergency (A&E) as these are the services that regularly receive GCA referrals.

- **Patients with features of GCA without ischaemic symptoms**: referrer starts high-dose steroids and contacts the rheumatology team for review in the GCA clinic within one working day.

- **Patients with features of GCA and ischaemic symptoms**: referred to A&E for assessment, receiving advice from both Ophthalmology and Rheumatology specialties. After exclusion of other serious pathology, the patient receives GC treatment followed by further diagnostic tests.
Temporal Artery Ultrasound
Axillary vasculitis (Large-Vessel GCA)
Fast Track GCA
MSE Teaching Hospitals Group

Assess clinical probability of GCA
Refer patients with high/intermediate probability

All 1-4 present? Refer to GCA Fast Track Pathway

Everyone else

New visual symptoms esp. partial/complete visual loss, amaurosis fugax, diplopia

60mg Prednisolone
Urgent ophthalmology referral

40mg Prednisolone
(60mg if jaw claudication or possible visual symptoms)
Urgent fax to rheumatology
Indicate clearly “GCA Fast Track Pathway”
Call to confirm receipt
Include patient’s phone number

*Key symptoms of GCA:
- New type of headache (“head pain”)
- Scalp tenderness
- Jaw or tongue claudication
- Visual (amaurosis fugax, double vision)
- Limb claudication
- Abnormal temporal artery
- Often in conjunction with:
  - PMR
  - Systemic upset

Aims of the GCA Fast Track Service
- Provide rapid access to specialist clinical assessment, temporal artery ultrasound, biopsy and other imaging for those with possible GCA
- Provide a secure diagnosis to as many patients as possible
- Reduce rate of sight loss and stroke in GCA
- Minimise the impact of Prednisolone in those who don’t have GCA
Clinical probability of suspected GCA

Low test
- test
  - negative: GCA unlikely
    - Re-evaluate for alternative diagnoses
  - positive: GCA uncertain
    - Perform additional tests and clinical re-evaluation

Intermediate test
- test
  - negative: Suggests GCA
  - positive: Does not suggest GCA

High test
- test
  - negative: Treat as GCA but additional tests and clinical re-evaluation are needed
  - positive: Treat as GCA
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<td>F</td>
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<td><strong>Onset</strong></td>
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<td>&gt;24 weeks</td>
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**SYMPTOMS:**

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<td>(uniocular Blurring, diplopia, amaurosis, jaw/tongue pain)</td>
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**SIGNS:**

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<td>bruit</td>
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**TOTAL SCORE**
suspected cranial and/or LV-GCA‡

perform ultrasound *†

low clinical probability

US -

GCA ruled out

US +/±

perform biopsy

PET/MRI

intermediate/high clinical probability

US -/±

perform biopsyΔ

cranial GCA

LV-GCA

perform PET/MRI Δ

US +

GCA confirmed
Fast Track GCA Pathway
MSE Teaching Hospitals Group

- Will be provided by all three hospitals
- Mainly focused on Primary care and also A&E and AMU, as they regularly receive GCA referrals. Also publicized among other specialties, e.g. ophthalmology and neurology and GIM who regularly encounter GCA.
- Reminders every 6 months. Regular case-based time-to-learn sessions arranged for GPs
- Any other patient the GP/Consultant considers as possible GCA can be referred through the fast track pathway.
- Any other patient the GP/Consultant considers as possible GCA can be referred through the fast track pathway.
Research dividend
HAS-GCA STUDY

- **Halo Score** (Temporal artery, its branches and Axillary artery) as a diagnostic, prognostic and disease monitoring tool for Giant Cell Arteritis (GCA)

- Funded by- Royal College of Physicians of Ireland

- Bresnihan- Molloy International fellowship awarded to Dr Alwin Sebastian for 2 years

- Participating Centres:
  - Southend, Basildon, Mid-Essex, Norwich

- Approval:
  - REC: 19/LO/1375
  - CPMS ID: 43203
  - IRAS: 264294