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Practical Algorithm for Surgical Management of Facial Pain

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Rationale for algorithm

- Facilitates decision making
- Aimed at maximal improvement / minimal side effects
- Individually tailored approach
- Standardization
- Eliminates uncertainty
- Patient and physician education

Figure 1. Flow diagram of the treatment algorithm

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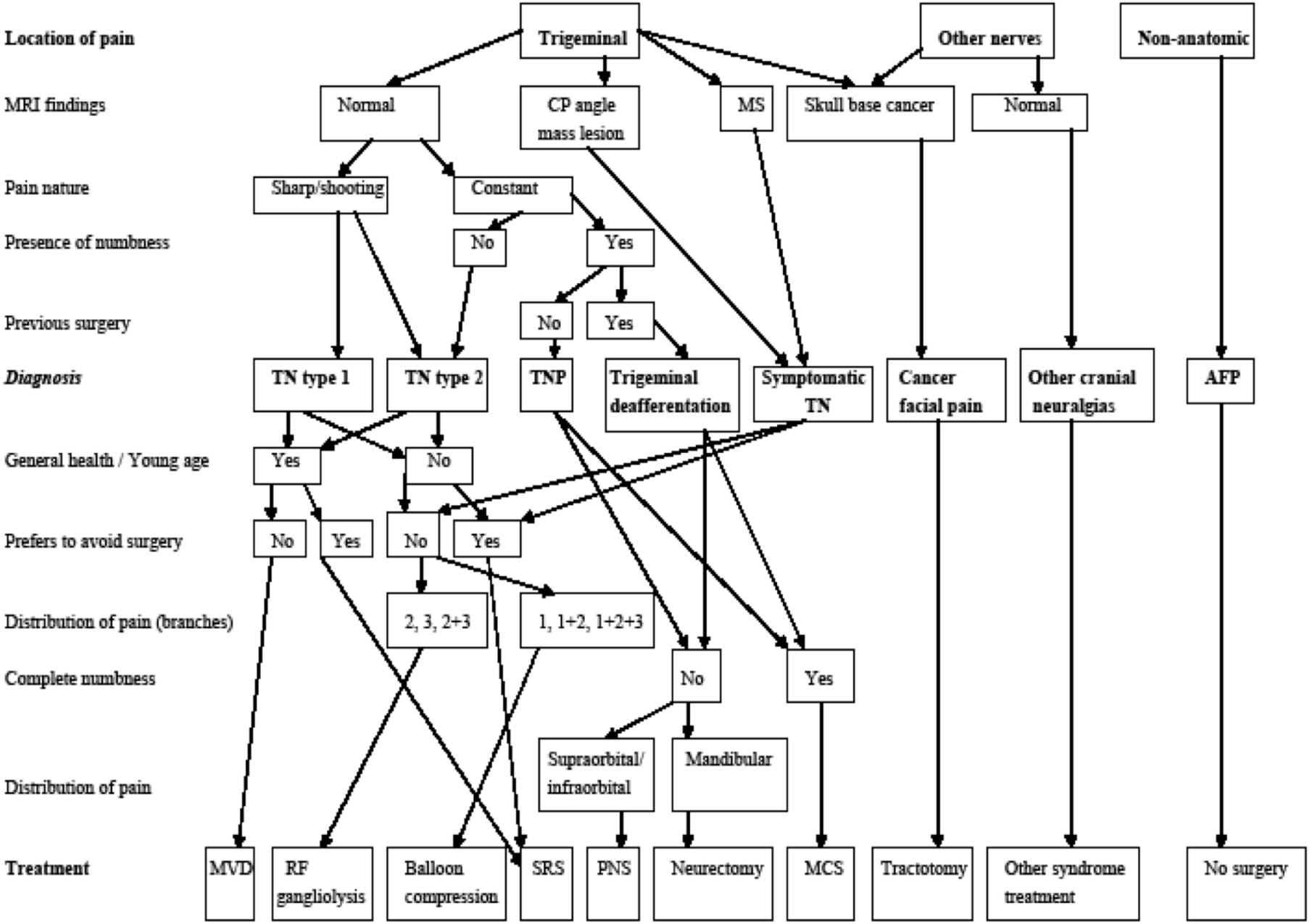

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Facial pain classification

Trigeminal neuralgia (classic–Burchiel TN 1)

Trigeminal neuralgia (atypical–Burchiel TN 2)

Symptomatic trigeminal neuralgia (MS, tumors)

Trigeminal deafferentation pain (iatrogenic)

Trigeminal neuropathic pain (trauma, infection)

Cancer facial pain (w/ short life expectancy)

Other cranial neuralgias (GPN, n. intermedius)

Atypical facial pain (psychiatric diagnosis)

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Treatment modalities

- Microvascular decompression
- Radiofrequency gangliolysis
- Balloon compression
- Stereotactic radiosurgery
- Peripheral nerve stimulation
- Neurectomy
- Motor cortex stimulation
- Tractotomy
- Surgery on other cranial nerves
- No surgery

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Initial questions

Distribution of pain

MRI findings

Nature of pain

Presence of numbness

Previous surgery

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Treatment questions

Healthy? Young?

Willingness to have surgery

Distribution of pain

Severity of numbness

Exact pain location

Figure 1. Flow diagram of the treatment algorithm

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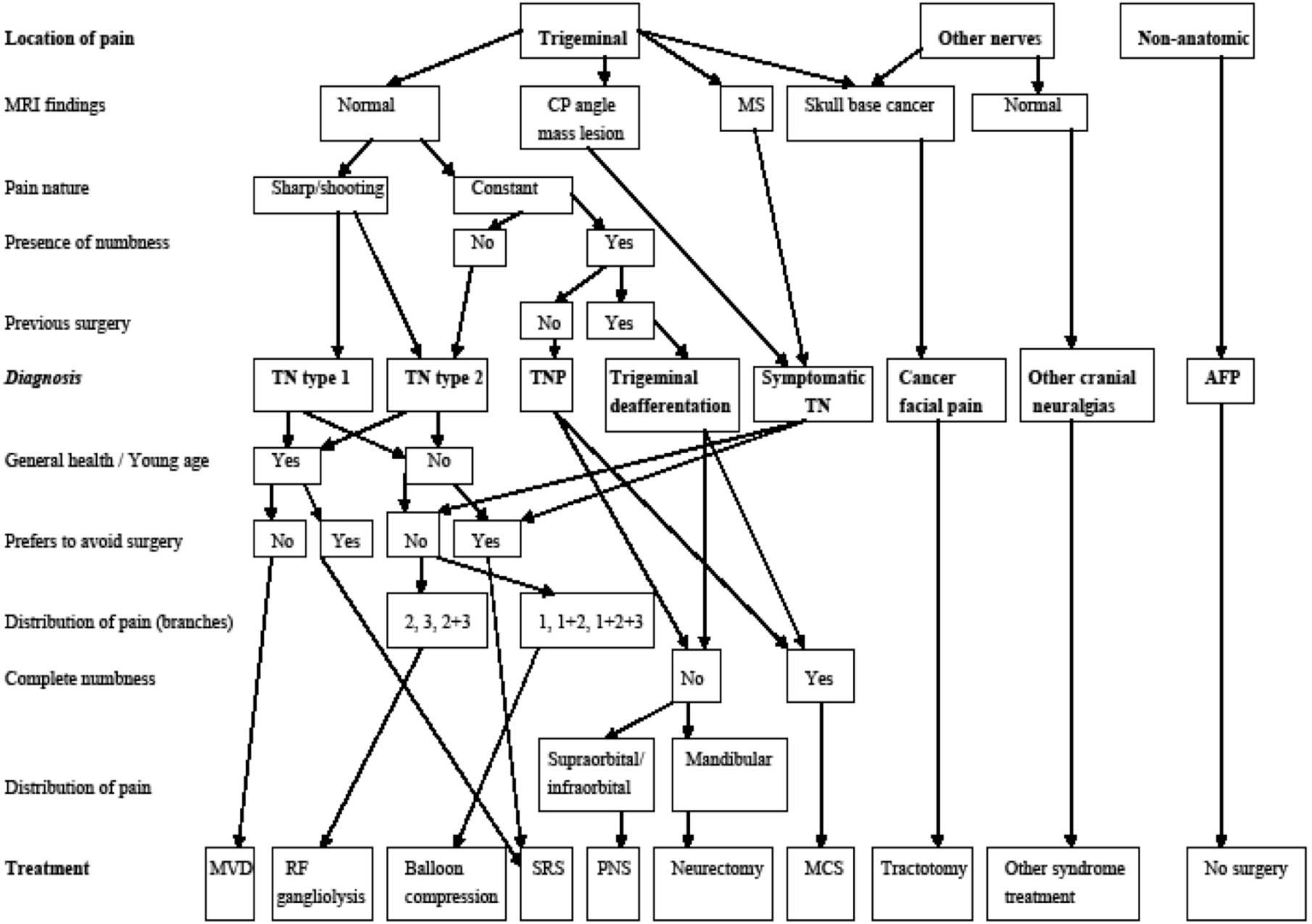

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Current Algorithm of Facial Pain Treatment

- ~ 100 new patients with facial pain/year
- ~ 65% - trigeminal neuralgia
  - ~35% - typical idiopathic TN
  - ~15% - atypical idiopathic TN
  - ~15% - secondary TN (MS, neoplasms, etc.)
- ~ 15% - trigeminal neuropathic pain
- ~ 5% - other cranial neuralgias / syndromes
- ~ 15% - atypical facial pain

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Current Algorithm of Facial Pain Treatment

~ 70 surgeries for facial pain /year

- ~30 microvascular decompressions
- ~25 percutaneous RF gangliolysis
- ~2-3 balloon compressions
- ~15 GK radiosurgery
- ~3 trigeminal peripheral nerve stimulation
- ~1-2 motor cortex stimulation

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Current Algorithm of Facial Pain Treatment

96% pain relief (at the time of discharge)

23% overall recurrence rate

~15% need another procedure

98% patient satisfaction

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Current Algorithm of Facial Pain Treatment

Head & Face Medicine

BioMed Central

Methodology

Open Access

Current algorithm for the surgical treatment of facial pain

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This algorithm has been published in a peer reviewed journal and is available for download and use free of charge at www.biomedcentral.com

The proposed treatment algorithm for intractable facial pain that includes open and percutaneous procedures, radiosurgery and neuromodulation, appears to be effective for patients with a wide variety of painful conditions and may be recommended for use in other institutions