

**Local, non-systemic, and minimally invasive therapies for calcinosis cutis:  
a systematic review**

**Journal:** Archives of Dermatological Research

**Authors (ORCID iDs):** Joanna Nowaczyk (0000-0001-7438-3559)<sup>a</sup>, Michał Zawistowski (0000-0002-5173-6283)<sup>a</sup>, Piotr Fiedor, MD, PhD, Prof.<sup>a</sup>

<sup>a</sup>Department of General and Transplantation Surgery, Medical University of Warsaw, Warsaw, Poland

**Corresponding author:** Piotr Fiedor, MD, PhD, Prof., Department of General and Transplantation Surgery, Medical University of Warsaw, Nowogrodzka 59, 02-006 Warsaw, Poland, email: piotr.fiedor@wp.pl

## Supplementary Content

**Table S1.** Search queries used to collect the data

<b>Database</b>	<b>Search query</b>	<b>Filters</b>	<b>Date of last search</b>	<b>Number of records</b>
<b>Pubmed</b>	((Calcinosis[MeSH Terms] AND Skin[MeSH Terms]) OR (calci* cutis)) AND ("sodium thiosulfate"[Supplementary Concept] OR Lithotripsy[MeSH Terms] OR "Laser Therapy"[MeSH Terms])	none	March 14, 2021	153
<b>Embase</b>	'skin calcification'/exp AND ('sodium thiosulfate'/exp OR 'extracorporeal shock wave lithotripsy'/exp OR 'laser'/exp)	none	March 14, 2021	128
<b>Web of Science</b>	((skin calcification) AND ((sodium thiosulfate) OR (extracorporeal shock wave lithotripsy) OR ESWL OR laser))	none	March 14, 2021	129

**Table S2.** Risk of bias assessment with the Joanna Briggs Institute Critical Appraisal tools.

Study	Study design	Q1 <sup>a</sup>	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Overall risk <sup>b</sup>
Topical sodium thiosulfate															
Abott et al. (2020)	Case report	✓	✗	✓	✓	✓	✓	?	✓						Moderate
von Hodenberg et al. (2020)	Case series	✓	✓	✓	✓	✓	✗	?	?	✗	NA				High
Bhari and Bharti (2019)	Case report	✓	✗	✓	?	?	✗	✗	✓						High
Ma et al. (2019)	Case series	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				Low
Karthik et al. (2019)	Case report	✓	✗	✓	✓	?	?	✗	✗						High
Tajalli et al. (2019)	Case report	✓	✗	✓	✓	✓	✓	✓	✓						Low
Topham et al. (2019)	Case report	✓	✗	✓	✓	✗	✗	✗	✓						High
García-García et al. (2017)	Case report	✓	✗	✓	✓	✓	✓	✓	✓						Low
Jost et al. (2016)	Case series	✓	✓	✓	✓	✓	✓	✓	✓	✓	NA				Low
Urretavizcaya et al. (2016)	Case series	?	?	✓	?	?	?	?	?	?	NA				High
Pagnini et al. (2014)	Case report	✓	✗	✓	✓	?	✓	✗	✓						Moderate
Perez-Moreno et al. (2014)	Case report	✓	✗	?	?	?	?	?	✓	✓					High
Wolf et al. (2008)	Case report	✓	✗	✓	✓	✓	✓	?	✓						Moderate
Intralesional sodium thiosulfate															
López-Sundh et al. (2020)	Case report	?	✓	✓	✓	✓	✓	✓	✓						Low
Olesen and Fage (2020)	Case series	✓	✓	?	✓	✗	✓	?	?	✓	✗				Moderate
Winter et al. (2020)	Double-blind, placebo-controlled pilot study	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	Low
Tonial et al. (2018)	Case series	✓	✓	?	?	?	?	?	✓	✓	✓				Moderate
Goossens et al. (2017)	Case series	✗	✓	✓	?	?	✓	✓	✓	✓	NA				Moderate
Gunasekera et al. (2017)	Case report	✓	✗	✓	✓	✓	✓	✓	✓						Low
Oh et al. (2017)	Case report	✓	✗	?	?	?	?	?	✗	✗					High
Baumgartner-Nielsen and Olesen (2016)	Case series	✗	✓	?	✓	✓	?	✓	✓	?	NA				Moderate
Smith (2013)	Case report	✓	✗	✓	✓	✓	✓	✓	✓						Low
CO <sub>2</sub> laser															
Cannarozzo et al. (2020)	Case series	✓	✓	?	?	?	?	✗	✓	✓	NA				High
Aristazabal et al. (2019)	Case report	?	✓	✓	✓	✓	✓	✗	✓						Low
Weig et al. (2019)	Case report	✓	✗	✓	✓	✓	✓	?	✓						Moderate
Zarate et al. (2017)	Case report	✓	✗	✓	✓	✓	?	?	✓						Moderate
Kutlubay et al. et al. (2014)	Case report	✓	✗	✓	✓	✓	✓	✓	✓						Low
Joo et al. (2004)	Case report	✓	✗	✓	✓	✗	?	✗	✓						Moderate
Chamberlain and Walker (2003)	Case report	✓	✗	?	?	✓	?	✓	✓						Moderate
Paek et al. (1996)	Case report	✓	✗	✓	✓	?	?	✗	✓						Moderate

Bottomley et al. (1996)	Case series	✓	?	?	?	?	✓	✓	✓	✓	NA		Moderate
Er:YAG laser													
Meissner et al. (2010)	Case report	X	X	X	X	X	X	X	✓				High
Diode laser													
Wollina (2012)	Case report	✓	X	?	X	✓	?	X	✓				High
Picosecond + CO <sub>2</sub> laser													
Abrouk et al. (2020)	Case report	✓	X	?	X	✓	X	X	?				High
Extracorporeal shock wave lithotripsy													
Delgado-Márquez et al. (2014)	Case report	✓	X	✓	✓	?	✓	?	✓				Moderate
Sultan-Bichat et al. (2011)	Case series	✓	✓	?	✓	?	✓	✓	✓	✓	NA		Moderate
Chan and Li (2005)	Case report	✓	X	✓	✓	✓	?	✓	✓				Moderate
Sparsa et al. (2005)	Case report	✓	X	?	✓	?	?	✓	✓				Moderate
Extracorporeal shock wave lithotripsy followed by intralesional sodium thiosulfate													
Pavlov-Dolijanovic et al. (2018)	Case report	✓	X	✓	✓	?	?	✓	✓				Moderate
Picosecond laser followed by topical sodium thiosulfate													
Eleryan et al. (2019)	Case series	✓	?	✓	X	?	?	✓	✓	✓	NA		Moderate

Abbreviations: Q, question.

Legend: ✓, Yes; X, No; ?, Unclear; NA, not applicable.

<sup>a</sup>Questions based on the JBI risk assessment checklists (see: <https://joannabriggs.org/critical-appraisal-tools>) for respective study designs.

<sup>b</sup>Overall risk of bias judgement was ranked as low in case >75% of questions were answered "Yes", high if the prevalence was <50%, and moderate otherwise.