**Material and Methods**

We conducted a systematic search, for this meta-summary, from the databases of PubMed, and Science Direct. The search terms included ("drug overdose" OR poisoning OR hypoglycemia OR "lactic acidosis" AND Metformin).

Further, it was filtered for the case reports published in the English language, and on adult (> 18 years) humans. We screened all the search results manually, and we included the relevant literature for Metformin toxicity only. Duplicate articles from different search databases were excluded manually.

**Data analysis**

We prepared the datasheet and evaluated it with help of Excel, Microsoft office 2019. Categorical variables were presented as frequency and percentage. Mean [standard deviation (SD)] or median [interquartile range (IQR)] was used for continuous variables as appropriate. We applied a non-parametric correlational statistical test to test the non-parametric statistical hypothesis as found appropriate. A p-value of < 0.05 was deemed significant.

All the statistical analyses were done using SPSS (version 25.0, IBM SPSS Inc., Chicago, IL, United States) unless otherwise indicated. Tabulation and final documentation were done using MS Office software (MS office 2019, Microsoft Corp, WA, United States).
Supplementary Table 1 Literature search

<table>
<thead>
<tr>
<th>Database</th>
<th>PubMed</th>
<th>Science direct</th>
<th>Google scholar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>keywords</strong></td>
<td>(&quot;drug overdose&quot; OR &quot;adverse drug reaction&quot; OR poisoning hypoglycemia &quot;lactic acidosis&quot; OR &quot;metabolic acidosis&quot;) AND Metformin</td>
<td>(&quot;drug overdose&quot; OR &quot;adverse drug reaction&quot; OR poisoning hypoglycemia &quot;lactic acidosis&quot; OR &quot;metabolic acidosis&quot;) AND Metformin</td>
<td>(&quot;drug overdose&quot; OR &quot;adverse drug reaction&quot; OR poisoning hypoglycemia &quot;lactic acidosis&quot; OR &quot;metabolic acidosis&quot;) AND Metformin AND &quot;Case Report&quot;</td>
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</table>
| **Page link**     | https://pubmed.ncbi.nlm.nih.gov/?term=%28%22drug%20overdose%22%20OR%20%22adverse%20drug%20reaction%22%20OR%20poisoning%20hypoglycemia%20%22lactic%20acidosis%22%20OR%20%22metabolic%20acidosis%22%29%20AND%20Metformin | https://www.sciencedirect.com/search?q=%28%22drug%20overdose%22%20OR%20%22adverse%20drug%20reaction%22%20OR%20poisoning%20hypoglycemia%20%22lactic%20acidosis%22%20OR%20%22metabolic%20acidosis%22%29%20AND%20Metformin | https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=%28%22drug%20overdose%22%20OR%20%22adverse%20drug%20reaction%22%20OR%20poisoning%20hypoglycemia%20%22lactic%20acidosis%22%20OR%20%22metabolic%20acidosis%22%29%20AND%20Metformin%20AND%20"Case%20Report"
er=pubt.caserepo
ts&filter=lang.eng
lish&filter=age.all
adult&sort=pubd
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G=

Primary results (n) 3590 10856 76800
(keyword results )

Screening (n)(after 291 149 12800
applying filters)

Eligibility (by 263 27
manually
the relevance of
each article)(n)

Inclusion (n) 184
(manually sorted
list of final literature
set after removal of
duplicates)
**Supplementary Table 2 Counts of studies and cases**

<table>
<thead>
<tr>
<th>Counts of studies</th>
<th>Counts of cases</th>
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</thead>
<tbody>
<tr>
<td>Total case reports</td>
<td>158</td>
</tr>
<tr>
<td>Total case series</td>
<td>26</td>
</tr>
</tbody>
</table>


50. Zheng L. Metformin as a Rare Cause of Drug-Induced Liver Injury, a Case Report and Literature Review. American Journal of Therapeutics [Internet]. 2016


68. Correia CS, Bronander KA. Metformin-associated Lactic Acidosis Masquerading as Ischemic Bowel. The American Journal of Medicine [Internet]. 2012 May


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148. Hermann LS, Magnusson S, Möller B, Casey C, Tucker GT, Woods HF. Lactic Acidosis during Metformin Treatment in an Elderly Diabetic Patient with


182. Shenoy C. Metformin-Associated Lactic Acidosis Precipitated by Acute Renal Failure. The American Journal of the Medical Sciences [Internet]. 2006 Jan