

BACKGROUND

- The American Association for the Study of Liver Diseases Guidance on Reproductive Health recommends consideration of drug-induced liver injury (DILI) when evaluating liver injury occurring in pregnancy
- To date, there has been no substantial investigation of DILI in pregnancy
- Data collected by the DILI Network (DILIN) provide an important opportunity to characterize DILI in pregnancy

METHODS

- Liver injury events occurring during pregnancy were identified by searching all cases enrolled in the DILIN database between September 2004 and May 2021 for pregnancy-related terms
- Associated clinical narratives were reviewed to confirm DILI onset during pregnancy or within the 6-month postpartum period
- For each case, demographic and clinical characteristics were extracted, including: age, reported ethnicity, timing of onset, implicated drug, DILI likelihood score, DILI type at onset, severity, maternal outcome, and fetal outcome

RESULTS

- Nineteen cases were identified; 14 of these were assigned a high causality score and analyzed further
- Seven (50%) cases occurred during pregnancy, 7 occurred during the 6-month postpartum period
- Thirteen (93%) cases presented with hepatocellular injury, 1 (7%) presented with cholestatic injury
- Thirteen (93%) cases resolved within 6 months, 1 (7%) required liver transplantation
- Of the 7 cases occurring during pregnancy, two (29%) pregnancies ended in healthy delivery, 2 ended in miscarriage, 3 (43%) had an unknown outcome

CASES

Table: Selected Demographic and Clinical Features from Cases of DILI in Pregnancy (All 19 Cases)

Case	Causality Score	Age	Ethnicity	Implicated Agent	Onset	DILI Type	Severity	Maternal Outcome	Fetal Outcome
1	1	43	W	Methyldopa	Pregnancy	HC	3	Resolution	Unknown
2	2	29	B/AA	Methyldopa	Pregnancy	HC	1	Resolution	Miscarriage
3	2	30	B/AA	Methyldopa	Pregnancy	HC	3	Resolution	Unknown
4	2	24	B/AA	Infliximab	Pregnancy	HC	4	Resolution	Delivered
5	2	20	W	Quetiapine	Pregnancy	HC	1	Resolution	Delivered
6	3	34	H/L	Isoniazid	Pregnancy	HC	5	Transplant	Unknown
7	3	28	W	Letrozole	Pregnancy	HC	2	Resolution	Miscarriage
8	2	28	B/AA	Methyldopa	Postpartum	HC	4	Resolution	Delivered
9	2	20	W	EE/Norethindrone	Postpartum	HC	3	Resolution	Delivered
10	1	32	H/L	Methyldopa	Postpartum	HC	4	Resolution	Delivered
11	2	28	W	Cefazolin	Postpartum	C	3	Resolution	Terminated
12	2	25	B/AA	Methyldopa	Postpartum	HC	3	Resolution	Delivered
13	2	39	B/AA	Methyldopa	Postpartum	HC	3	Resolution	Delivered
14	2	26	W	Methyldopa	Postpartum	HC	3	Resolution	Delivered
15	4	37	B/AA	Hydroxychloroquine	Pregnancy	HC	3	Resolution	Delivered
16	4	25	B/AA	Nitrofurantoin	Pregnancy	C	3	Resolution	Delivered
17	4	31	B/AA	Methyldopa	Pregnancy	HC	3	Unknown	Unknown
18	4	36	W	Valacyclovir	Pregnancy	HC	3	Resolution	Delivered
19	4	45	B/AA	Ciprofloxacin	Postpartum	HC	3	Chronic	Terminated

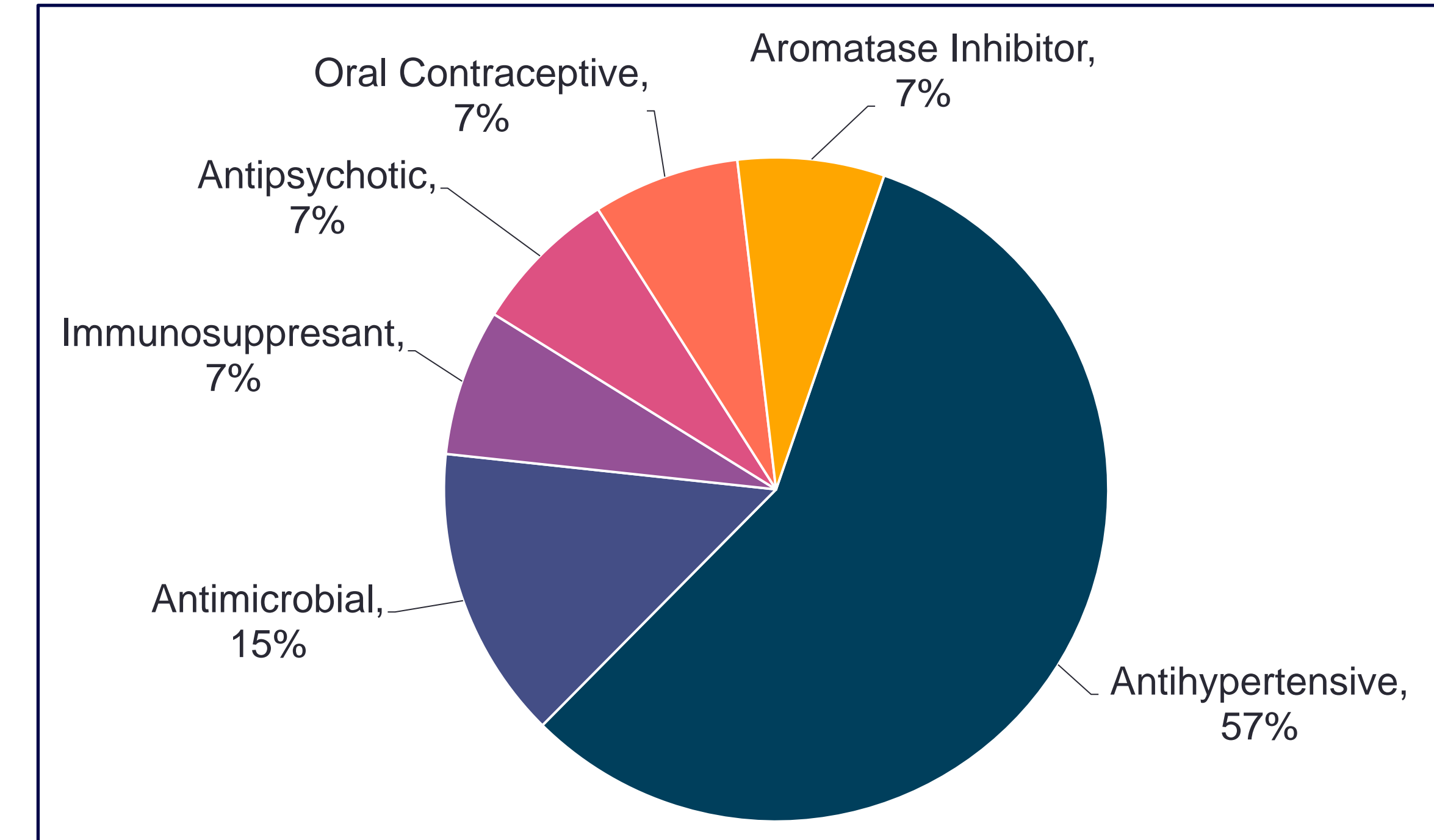
Causality Score – 1 = Definite; 2 = Highly Likely; 3 = Probable; 4 = Possible; 5 = Unlikely

Ethnicity – B/AA = Black or African-American; W = White; H = Hispanic or Latino

DILI Type – HC = Hepatocellular; C = Cholestatic

Severity – 1 = Mild; 2 = Moderate; 3 = Hospitalized; 4 = Severe; 5 = Fatal/Transplanted

IMPLICATED AGENTS



CONCLUSIONS/CLINICAL SIGNIFICANCE

- DILI in pregnancy most commonly presented with a hepatocellular pattern of injury
- Methyldopa was the leading cause of DILI in pregnancy
- Additional data is needed to determine if DILI in pregnancy is associated with adverse pregnancy outcomes
- DILI should be considered when evaluating liver injury in pregnancy, especially when liver injury is observed during treatment with methyldopa

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